# Operating Instructions

# Hoval

## BioLyt (50,70,75)
## BioLyt (100,110,130,150,160)
Wood pellet boiler

**Figure:** BioLyt (50-75)

**Figure:** BioLyt (100-160)

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# 1. Information about your heating system

Dear heating system owner,
With the purchase of this Hoval BioLyt (50-160) wood pellet boiler, you have made an excellent choice. It offers you all the advantages of a modern and efficient heating system.

Please read these instructions carefully. They describe how the boiler works, how it is operated and serviced.

Further information can be obtained from our Sales and Service Centres. (See last page for contact details).

## 1.1 Fuel quality / pellet delivery

### 1.1.1 Fuel quality

The BioLyt (50-160) wood pellet boiler has been designed for optimum combustion of wood pellets. The pellets must meet the requirements of at least one of the standards listed below

- ÖNORM M 7135
- DIN 51731 / HP5 (DINplus)
- SN 166000
- EN 14961-2 / A1 (ENplus/A1)

Hoval recommends ENplus (Class A1):

### 1.1.2 Pellet delivery

- Do not fill the storage room until after initial commissioning of the boiler.
- Switch off the heating system as instructed 15 min. before filling the storage room.
- To measure pellet consumption since the last delivery, reset the counter "USAGE 1." You can measure consumption over a specific period of time (e.g. annual consumption) by always resetting the counter on a specific date (e.g. January 1). For further information, see Chapter 4.11.03.

## 1.2 Important addresses and telephone numbers

Heating engineer _____

_____

_____

Plumber _____

_____

_____

Electrician _____

_____

_____

Master chimney sweep _____

_____

_____

## 1.3 BioLyt (50-160) wood pellet boiler

To be completed by the heating engineer:

Order No. / Manufacturing No.:_ _____

Boiler type: _____

Boiler power rating: _____ kW

Hot water buffer storage tank size (if present): _____

Calorifier size: _____

Heating pump type: _____

Heating regulator type: _____

Mixing valves type: _____

**Calculation basis for heating system**

Lowest outside temperature: _____ °C

Energy demand: _____ kW

Max. flow temperature: _____ °C

# 2. Important information

## 2.1 Key to symbols used

Please pay particular attention to the following symbols used in this operating manual.

**Failure to observe instructions to this effect can lead to danger to persons.**

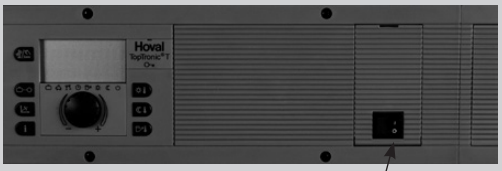
**Failure to observe instructions to this effect can lead to malfunctions or damage to the boiler or the heating system.**

**The marked sections of text contain information and tips on operating and running the system.**

## 2.2 Safety information

(Information for the protection of persons)

- **Caution**
  **Switch off the heating system as instructed 15 min. before filling the storage room.**



**Press the blocking switch.**

- **Keep the air supply to the boiler room open:**
  **Air inlets and outlets must not be closed. It is important to ensure that the combustion air required for correct operation of the boiler can flow unhindered in order to protect operating personnel from an oxygen-depleted atmosphere.**
- **Do not operate the boiler with the doors or pellet hopper open (danger of burn-back). In addition, any sparks emitted from the boiler could cause a fire.**
- **The system must be cleaned regularly, otherwise any possible warranty claims will become invalid.**
- **Parents must keep their children away from the boiler room; the heating system is not a toy!**
- **Do not burn unsuitable fuel (see Chapter 1.1); otherwise, any possible warranty claims will become invalid.**
- **Do not carry out any modifications to the system (possible danger to persons; possible loss of warranty).**

## 2.3 Entering the pellet storage room, storage tank

Under unfavourable circumstances, an increased concentration of harmful gases (such as carbon monoxide) may occur in pellet storage rooms, possibly posing a risk when accumulating over a longer period of time. Despite the fact that under normal circumstances, there is no risk at all, the possibility of such a scenario cannot be ruled out.

- If work is being carried out in filled storage rooms, a second person must always be present outside the room for safety reasons.
- The pellet storage room must always be thoroughly aerated before anyone enters it.
  The storage room must be ventilated for at least 15 minutes. In the case of pellet storage rooms with a volume of more than 10 t, the duration of ventilation must be extended or mechanical ventilation provided.
- No-one should enter the storage room in the four weeks following filling. If it is necessary for persons to enter the storage room, the room must be ventilated for at least 2 hours before entering.
- It must be ensured that the storage room door remains open while there are persons inside the storage room.
- Entering fuel storage rooms that have not been aerated (particularly underground tanks) must be avoided, and only trained personnel is permitted to do so. Before entering the room or tank, the concentration of CO must be measured (the concentration must be less than 30 ppm). If necessary, thoroughly aerate the storage room or tank before entering it.

- It the storage area is difficult to access or if it is accessible only from above (as in the case of underground tanks), the person entering the tank must be additionally secured.

- Keep children away from the pellet storage area!

- If there are moving parts (worm conveyors) in the storage room, turn off the mains switch of the heating system before entering the storage room, as otherwise there is a risk of injury.

- Smoking, naked flames and other possible sources of ignition are prohibited inside the storage room.

## 2.4 Cautionary notes

(Information on the protection of the heating system)

**Checking the water level**
Check the water level in the system at regular intervals (see Chapter 6).

**Filling the heating system**
The heating system can normally be filled and topped up with mains water. No chemical additives should be added to the water. The water quality can vary greatly in different parts of the country (you can obtain information about the water quality from your local water company), and it might not always be suitable for filling the heating system (highly corrosive or very hard water).

Please contact your heating engineer in such cases (see also Technical Information).

**Circulation pumps**
During the periods when no heating is required, the circulation pumps should be operated for approx. 2 minutes at least once every month. This will prevent the pumps from seizing up.

**Tightness / Burn-back protection**
The doors and pellet hopper must be checked for leaks on an annual basis. Smoke leaks should be avoided in order to prevent any toxic low-temperature gases from escaping into the boiler room. Moreover, leaky doors or a faulty pellet hopper seal could cause the embers to burn back into the pellet burner.
.

**Operation and cleaning**
Periodic cleaning and inspection by the heating engineer or Hoval customer service will not only extend the service life of the pellet boiler, but also increase its operating safety and ensure that a high combustion efficiency is maintained.

- In winter mode, the boilers must be cleaned approx. every 2 weeks by means of the special tool supplied and a vacuum cleaner with ash retainer.

- Pellet storage rooms must be cleaned regularly (approx. every 3-4 years), and the sawdust which has accumulated must be disposed of!

- Large-scale pellet-fired systems must be monitored on a daily basis when operated in winter at full load. The pellet storage rooms and discharge systems must also be checked for fault-free operation and to ensure that the supply of pellets is sufficient.

**Protecting the boiler**
Do not use sprays, solvents, chlorine based cleaning products, paint, adhesives etc. in the proximity of the boiler. These substances can cause corrosion inside the boiler and the flue gas system.

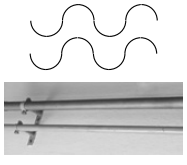
**Pressure relief valve, backfire protection and thermal discharge safety device**
The correct functioning of the various safety devices (pressure relief valve on the heating installation, backfire protection valve on the burner, pellet hopper seal, thermal discharge safety device) must be checked periodically by the heating engineer.

The heating installation must be inspected regularly according to local regulations.

**For Austria only**
In Austria, with industrial plants exceeding 50 kW, the FAV ordinance for combustion plants must also be observed.

## 3. Functional principle of the heating system

It is important that the perfectly coordinated individual components function properly to ensure that your home stays warm in winter.

| | COMPONENTS | FUNCTION: |
|---|---|---|
| | Wood pellet boiler | Burns the pellets safely and in an environmentally friendly manner.. Extracts the heat from the combustion gases and transfers it to the heating water. |
| | Pellets | The process of combustion within the boiler converts the natural energy contained in the pellets into heat. |
| | Optional heating water buffer storage tank | It is used for intermediate storage of hot **heating water** (max. 90°C). It thus compensates for any differences between heat generation and demand. |
| | Storage calorifier | Holds a reserve of **domestic hot water** for household consumption (e.g. for showering). |
| | Boiler controller with heating regulator | Controls and monitors the operation of the boiler. Maintains the desired room temperature optimally and fuel-efficiently, independent of the outside temperature. |
| | Radiators underfloor heating, if fitted | Releases the heat of the heating water into the room. |
| | Heating pump | Transports the heating water from the boiler to the radiators and back into the boiler, where it is reheated. |
|  | Heating water and heating pipes | Transports the heat which is generated from the boiler to the radiators. |

Mixing valve

Adjusts the heating flow temperature to the radiator to maintain the desired room temperature whatever the outside temperature. This is achieved by mixing in colder return heating water.

Pressure gauge

Displays the water pressure in the heating system.

Air vent

Ensures that the heating pipes contain only heating water and no air.

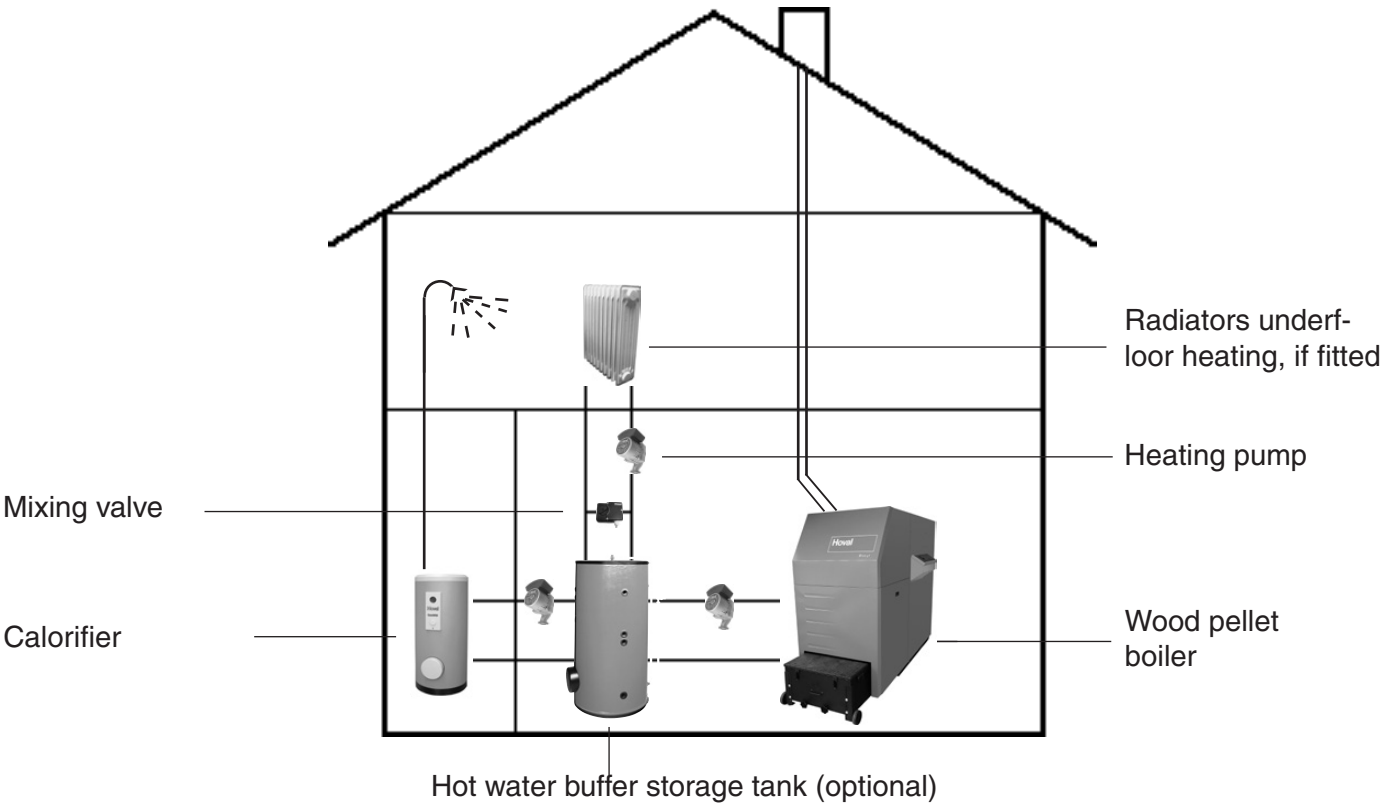
Safety valve

Prevents overpressure in the system.

Membrane expansion tank

Maintains the pressure in the system at a constant level and absorbs the expansion water.

Depending on the type of heating system selected, some of the components might not be present or others added. The heating engineer will explain the system to you.



## 3.1 What happens inside the BioLyt?

The Hoval BioLyt has been designed for the low-emission combustion of wood pellets in accordance with ÖNORM M 7135 and DIN 51731, HP5 (or DIN-plus), as well as EN 14961-2, A1 or ENplus.
The metering screw conveys the wood pellets from the pellet hopper to the feeder screw via a down-pipe with rotary valve. The metering screw adjusts the amount of pellets conveyed as a function of the power demand, while the continuously operating feeder screw feeds the pellets into the burner pipe. Degassing of the pellets takes place in the rear section of the burner pipe by means of primary air supplied by the pressure fan. The combustible gas thus generated is thoroughly mixed with secondary air (supplied by the induced draught fan) in the front section, where it burns cleanly and completely with low emission levels.
The horizontal combustion results in a flame similar to that of an oil or gas burner. The combustion system achieves an excellent pellet burn-out rate. Thanks to the large, mostly refractory lined combustion chamber, it is possible to attain a long dwell time of the hot gases as well as sufficiently high combustion temperatures. These factors contribute to a further optimisation of the burn-out quality. The heat exchange between the hot gases and the heating water takes place by means of the proven thermolytic secondary heating surface. The secondary heating surface is cleaned fully automatically.
The ashes arising as a result of the combustion process are collected in the combustion chamber and are periodically conveyed to the ash container by the ash discharge screw.

**Figure:** BioLyt (100-160)

**Fig. 01**

### 3.2 How are the pellets extracted and conveyed from the storage room?

The pellets are extracted from the storage room by means of a worm conveyor and then transported to the pellet hopper on the boiler by means of a vacuum turbine.

The pellet hopper on the boiler includes two filling level indicators:
- for the signal “pellet hopper full” / top
- for the signal “pellet hopper empty” / bottom

The pellet hopper can only be filled during the preset enable time in order to minimise the noise in the building.
The filling process is started every time the burner enters burn-out mode or, at the latest, when the bottom fill level indicator signals “empty”.

First, the suction turbine starts up.
Then, the discharge screw starts operating after a delay of approx. 15 secs.
As soon as the upper filling level indicator sends the signal for “pellet hopper full”, the discharge screw is stopped; the suction turbine then stops operating after a set time delay (for purging the hoses).

The extraction system can be disabled during two periods of time per day (e.g. to avoid unwelcome noise during the night). The factory settings are from 12.30 p.m. to 2.30 p.m. and from 9.30 p.m. to 8.00 a.m. To ensure that there is an adequate supply of pellets to span such off-periods, forced burn-out with filling of the pellet hopper is carried out 30 min. before the beginning of every off-period. Off-periods can be deactivated by setting the beginning and end of the respective period to 00.00 (see Chapter 4.11.4).

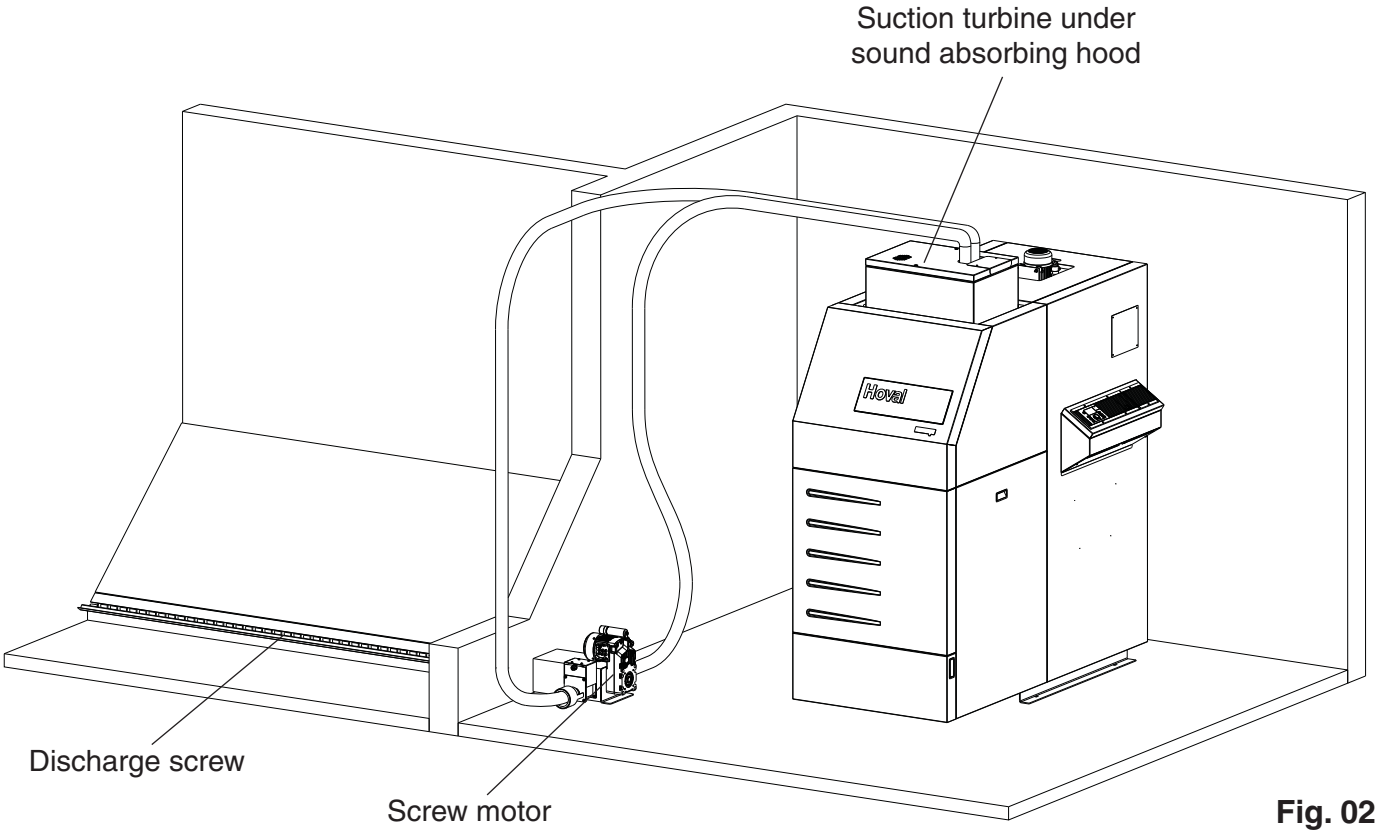



**Fig. 02**

# 4. Heating system control

## 4.1 What is the function of the boiler controller TopTronic® T

The boiler controller, together with the temperature sensor connected to it, is, so to speak, the brain of the heating system. Its main functions are:
- maintaining the desired room temperature independent of the outside temperature
- heating the living space when required
- producing warm water (e.g. for showering) only when required
- displaying information

Further functions:
- input of desired temperatures and operating modes
- turning the heat generator ON/OFF
- monitoring temperatures

The correct settings for the heating system have already been applied by Hoval, or the installer, during commissioning. Any changes to those settings should only be carried out if you go away on a trip or if your home is too cold or too warm. You can find an overview of the most frequently asked questions and the answers to them in Chapter 4.4.3.

ENERGY

## 4.2 How you can save energy

**For your benefit and for the environment,** use energy efficiently and avoid unneccessary losses:
With little effort, you can optimise the operation of your system and make it worth while.

**It is worth turning the heating off again during spells of warm weather in autumn** to prevent your heating system generating unnecessary heat when outside temperatures are low in the morning and thus overheating your home. Turning the heating on or off depending on the weather conditions is one of the most effective energy-saving measures. If you want to save yourself the effort of going down into the cellar, you may want to consider acquiring a “remote control” from Hoval, which will allow you to operate and control the heating comfortably from your living room.

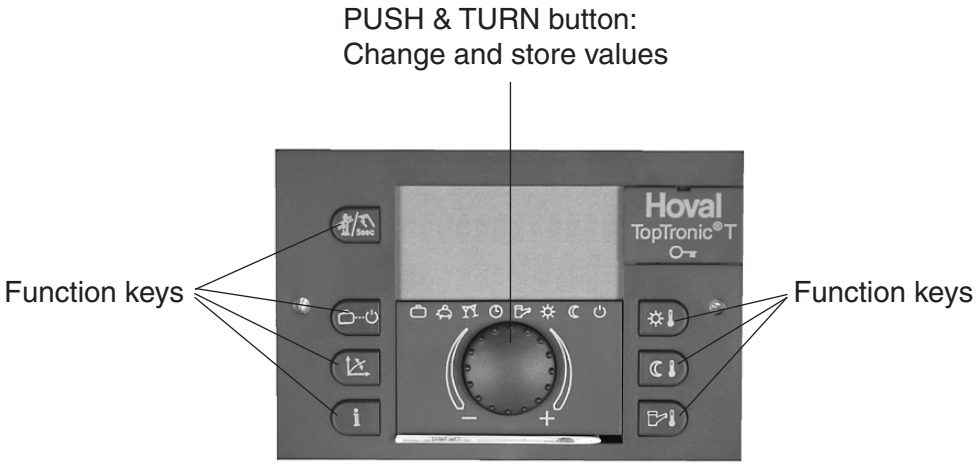
## 4.3 Basic display

The basic display shows the day of the week, date and time as well as the current heat generator temperature or another temperature (systemdependent).

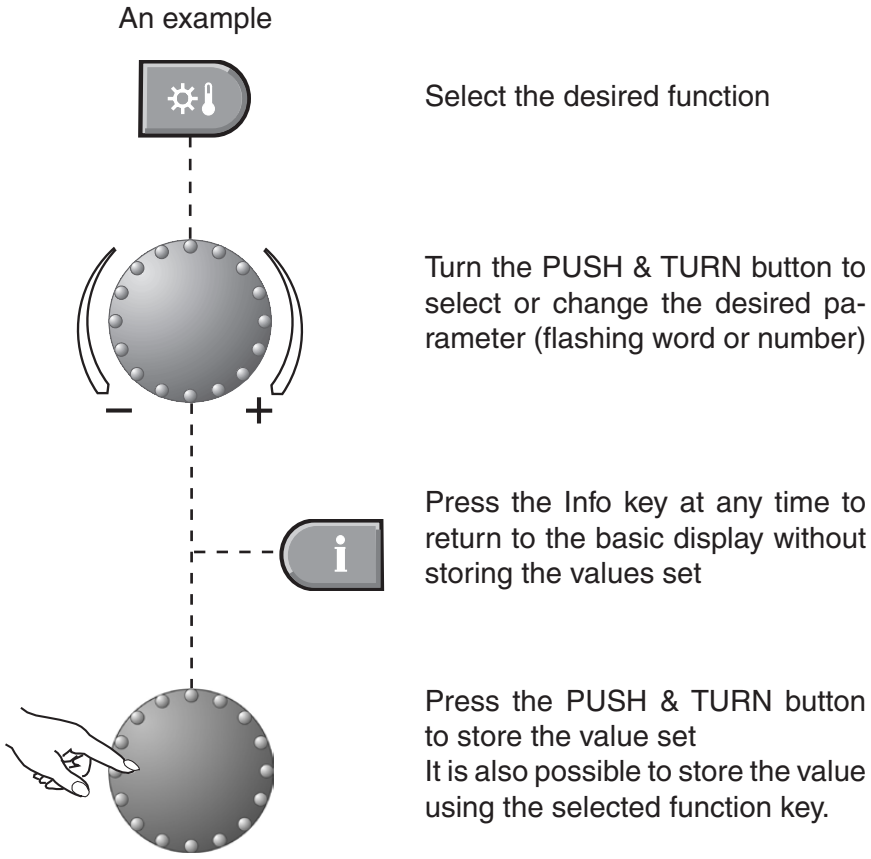
## 4.4 Operating and display elements

### 4.4.1 Function of the operating elements

The central PUSH & TURN button and the labelled keys are designed for easy and straightforward operation.




### 4.4.2 Basic procedure for changing settings

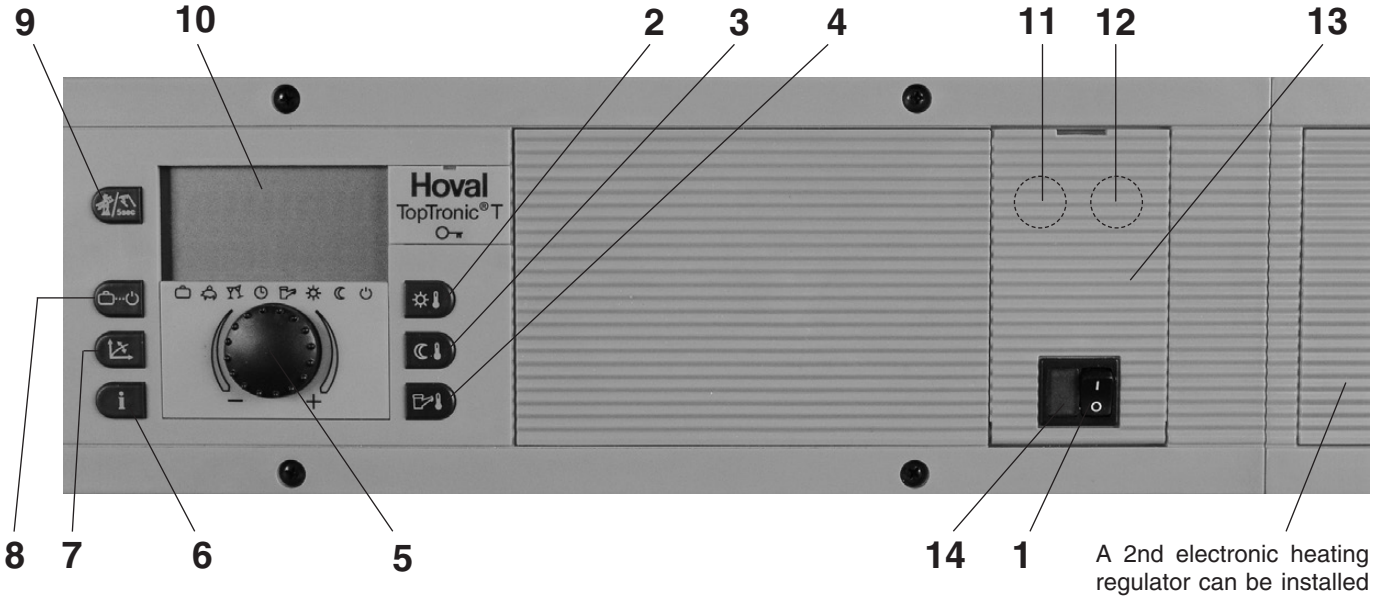

An example
Select the desired function
Turn the PUSH & TURN button to select or change the desired parameter (flashing word or number)
Press the Info key at any time to return to the basic display without storing the values set
Press the PUSH & TURN button to store the value set
It is also possible to store the value using the selected function key.

### 4.4.3 What to do if ...

The following information can be used as a first level support in frequently occurring situations.

| Observation | Remedy |
|---|---|
| **It is too cold** | Set higher values for the room temperature with and the rotary button (Chapter 4.4.1). |
| **It is too warm** | Set lower values for the room temperature with and the rotary button (Chapter 4.4.1). |
| **From now on, equal day and night temperatures should be maintained continuously** | Use to set the operating mode to ☼ "HEATING" (Chapter 4.6.1, 4.6.4). |
| **This evening, I want the heating to remain on for longer** | Use to set the operating mode to "PARTY" and set the desired time (Chapter 4.6.1, 4.6.3). |
| **I require a larger amount of hot water at the moment** | Press for 3 seconds and set the additional re-charging time (Chapter 4.9.2). |
| **From now on, hot water but no heating is required** | Use to set the operating mode to "SUMMER" (heating off, hot water only) (Chapter 4.6.1, 4.6.4). |
| **Suddenly, there is no heating or hot water; it is cold.** | Check the heating regulator and boiler controller for alarms (Chapter 5.2, 5.3) and consult a heating engineer if necessary |
| **The room temperature setpoint requires frequent adjustments because it is too cold or too hot** | Change the set heating curve (Chapter 4.8.2).<br>Changing the heating curve does not make sense if your system is fitted with a room air sensor (or room station) and an outside sensor. The correct settings for the heating curve are then provided automatically. Consult a specialist if necessary. |
| **I will be absent for several hours during the day today** | Use to set the operating mode to "ABSENT TIL" and set the time of your return (Chapter 4.6.1 - 4.6.3). |
| **I am going away on a short trip (e.g. 3 days)** | Use to set the operating mode to "HOLIDAY TIL" and set the date of your return (Chapter 4.6.1 - 4.6.3). |
| **I am going away for an indefinite period of time** | Use to set the operating mode to ☾ "RED. HEATING."<br>On your return, use to set operating mode ◷ "AUTOMATIC" (Chapter 4.6.1, 4.6.2, 4.6.4). |
| **In summer, it is too cold or too warm.** | Indicates that the summer disconnection is active. If it is too cold for you, use to set operating mode ☼ "HEATING" (Chapter 4.6.1, 4.6.4). |

## 4.4.4 Control elements on the boiler control panel




A 2nd electronic heating regulator can be installed here (for 2nd residential unit) if required.

| Key | Designation | Function |
|---|---|---|
| 1 | Blocking switch | Switch off and block the boiler (e.g for cleaning). |
| 2 | Daytime room temperature | Set the daytime room temperature. Chap. 4.5.1.1 |
| 3 | Reduced room temperature | Set the night-time room temperature (reduced heating). Chap. 4.5.1.2 |
| 4 | Domestic hot water temperature | Set the domestic hot water temperature. Manual DHW re-charging. Chap. 4.9.1, 4.9.2 |
| 5 | Push & Turn button | Change the values by turning. Acknowledge the values by pressing. Select functions by pressing and turning. |
| 6 | Information key | • Show operating data on the display<br>• Return to the basic display without saving the values.<br>Ex. 4.11.1 |
| 7 | Heating characteristics | Set the heating curve Chap. 4.8.2 |

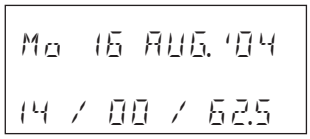
| Key | Designation | Function |
|---|---|---|
| **8** | Operating mode selection key | Select the operating modes |
| | Holiday | Turn off the heating system while you are on holiday (frost protection) Chap. 4.6.1 - 4.6.3 |
| | Absence | Switch off the heating temporarily Chap. 4.6.1 - 4.6.3 |
| | Party | Extend heating operation Chap. 4.6.1 - 4.6.3 |
| | Automatic | Automatic heating according to the preset heating times = normal heating operation Chap. 4.6.1, 4.6.4 |
| | Summer | Hot water only, heating off Chap. 4.6.1, 4.6.4 |
| | Heating | Constant heating mode Chap. 4.6.1, 4.6.4 |
| | Reduced heating | Constant reduced heating operation Chap. 4.6.1, 4.6.2, 4.6.4 |
| | Standby | System off - frost protection active Chap. 4.6.1, 4.6.2, 4.6.4 |
| **9** | Manual mode / emission measurement | For heating technician only or for preliminary acknowledgement of a maintenance prompt (see chap. 4.11.6). |
| **10** | Display | The basic display shows the day of the week, date and time, as well as the current heat generator temperature or another temperature (system-dependent).<br> <br>Possible readouts:<br>1 Active heating time 24h<br>2 Day display<br>3 Display of the active operating state and the clock programme<br>4 Time<br>5 Selected operating mode<br>6 Date / Day / Month / Year<br>7 Heat generator temperature or another temperature (system-dependent) |
| **11** | Control panel fuse, under the hinged cover | Check the 6.3 A fuse if all displays remain dark. This may only be done by the heating technician! |
| **12** | Reset button, under the hinged cover | Press the Reset button under the hinged cover if the display shows “Error.” If this happens frequently, notify your Customer Service centre. |
| **13** | Brief operating instructions in the hinged cover | Special brief operating instructions are provided with the boiler controller. |
| **14** | Burner fault light | Press the Reset button (see no. 12) |

## 4.5 Main settings

### 4.5.1 Changing the room temperature

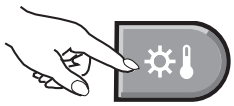
#### 4.5.1.1 Setting the desired room temperature, day

ⓘ These adjustments can also be carried out on a room station.



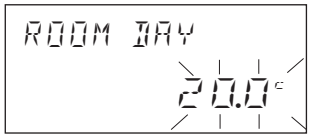

1

Start - Basic display



2

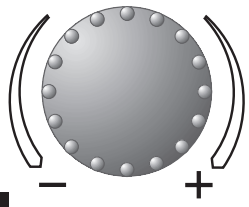
⇨ Tap the “Daytime room temperature” key.




3

The daytime room temperature setpoint flashes.

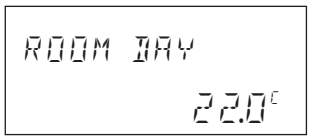
ⓘ If “MC1” is shown on the display, you need to select the heating circuit.
(Information on which heating circuit to select for your home can be found on page 4 of these instructions).




4

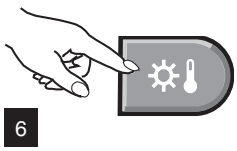
⇨ Set the desired room temperature by turning the “PUSH & TURN button.”

ⓘ Setting range 5 - 30°C
(Factory setting 20°C)




5

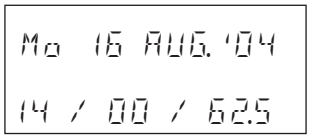
The new “Daytime room temperature” setpoint appears on the display.



6

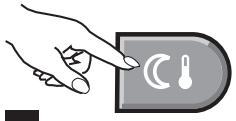
⇨ Tap the "Daytime room temperature" key to acknowledge the temperature setpoint.

4.5.1.2 Setting the desired reduced (night-time) temperature



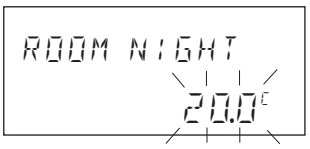

1

Start - Basic display



2

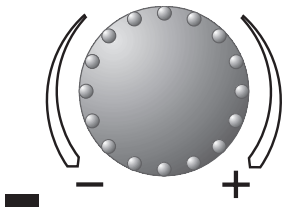
⇨ Tap the “Reduced room temperature” key.




3

The night-time room temperature setpoint flashes.

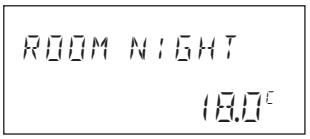
ⓘ If “MC1” is shown on the display, you need to select the heating circuit.




4

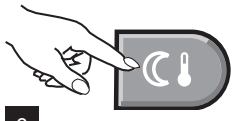
⇨ Set the desired room temperature by turning the “PUSH & TURN button.”

ⓘ Setting range 5 - 30°C
(Factory setting 16°C)




5

The new “Reduced room temperature” setpoint appears on the display.



6

⇨ Tap the "Reduced room temperature" key to acknowledge the temperature setpoint.

## 4.6 Operating modes

### 4.6.1 Function of the operating modes

| Operating mode | Function | Application |
|---|---|---|
| **HOLIDAY** | - Heating system off while you are on holiday.<br>- Room temperature set to minimum (10°C).<br>- Calorifier frost protected (5 °C). | **You are going on holiday for e.g. 1 week and you know the date of your return.** Chap. 4.6.2, 4.6.3 |
| | ⓘ End of holiday = Return date. Normal heating is resumed on the day of your return!<br>Setting range: current date + 250 days.<br>To switch back to automatic mode prematurely - press the "operating mode selection key" for 3 seconds. | |
| **ABSENT** | - Heating system OFF (heating temporarily switched off until set time).<br>- Room temperature set to minimum (10°C).<br>- Calorifier frost protected (5 °C). | **You leave home in the morning and come back in the evening.** Chap. 4.6.2, 4.6.3 |
| | ⓘ Setting range: 0.5 - 24 h.<br>To switch back to automatic mode prematurely - press the "operating mode selection key" for 3 seconds. | |
| **PARTY** | - Extend heating operation (daytime room temperature) up to set day/night time (you do not want to reduce the room temperature at the preset time). | **You have guests in the evening.** Chap. 4.6.3 |
| | ⓘ Setting range: 0.5 - 24 h.<br>To switch back to automatic mode prematurely - press the "operating mode selection key" for 3 seconds. | |
| **AUTOMATIC** | - Automatic heating mode according to the heating times set in the 1st switching times program = normal heating mode. | **You want to heat as cost effectively and efficiently as possible.** Chap. 4.6.4 |
| | ⓘ Factory setting:<br>Heating: 06.00 - 22.00<br>Reduced heating: 22.00 - 06.00<br>Domestic hot water: 05.00 - 22.00 | |
| **SUMMER** | - Heating system OFF<br>- DHW is produced at the times set in the switching times program (for showering, etc.)<br>- Frost protection active. | **Heating the rooms is unnecessary due to the high outside temperatures.** Chap. 4.6.4 |
| | ⓘ Factory setting for domestic hot water: 05:00 - 22:00<br>Operating mode “Summer” cannot be selected if each heating circuit is adjusted separately. | |
| **HEATING** | - The room temperature is not reduced during the night.<br>- The rooms are continuously heated at the set “daytime room temperature” .<br>- DHW mode according to switching program. | **You would like to heat the rooms during the night, too.** Chap. 4.6.4 |
| **RED. HEATING** | - The rooms are continuously heated at the "Reduced room temperature."<br>- Continuous reduced heating mode. | **You are going away for an indefinite period of time.** Chap. 4.6.2, 4.6.4 |
| **STANDBY** | - Heating system OFF.<br>- Frost protection active.<br>- No DHW mode. | **You are travelling for an indefinite period of time in spring or in autumn. It does not matter if the rooms are cold on your return. You do not need warm water on your return.** Chap. 4.6.2, 4.6.4 |

### 4.6.2 Operating modes for holiday and absence?

Depending on how long you will be away and what your requirements are with regard to comfort, there are different operating modes available for interrupting or reducing the heating. In any case, you will save a lot of energy and money if the rooms are not heated or heated less during your absence.
The following table is intended as a guide for finding the best operating mode for each particular case:

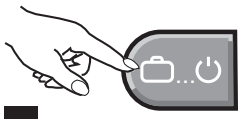
| Application | Operating mode | Function |
|---|---|---|
| **You are going on holiday for e.g. 1 week and you know the date of your return.** | "HOLIDAY TIL"<br> <br>Heating system and DHW off while you are on holiday. | - Heating system OFF / Calorifier frost protected (5°C)<br>- Room temperature set to minimum (10°C)<br>Setting range:<br>from current date to 250 days in the future!<br>End of holiday = Return date. Normal heating is resumed on the day of your return!<br>Early return:<br>Press for 3 sec. to return to dann "AUTOMATIC" (Chap. 4.6.1, 4.6.3). |
| **You leave home in the morning and come back in the evening.** | "ABSENT TIL"<br> <br>Heating interrupted temporarily | Heating temporarily interrupted until set time.<br>Setting range: 0.5 - 24h |
| **You will be away for an indefinite period of time and want the living area to be at the set reduced temperature on your return.** | "RED. HEATING"<br> <br>Continuous reduced heating mode | Continuous reduced heating and DHW mode (reduced, see Chap. 4.9.3) around the clock. |
| **You will be away for an indefinite period of time during spring or autumn and you don't mind if your home is cool on your return.** | "STANDBY"<br> <br>System off - frost protection active | The entire heating system is switched off and frost-protected. Calorifier is frost-protected! |

For a detailed description of how to set the operating modes, see Chap. 4.6.3, 4.6.4.

You can return to the “AUTOMATIC” function (normal heating mode) at any time by “pressing” for 3 sec.

## 4.6.3 Changing the operating mode - for "HOLIDAY TIL," "ABSENT TIL" and "PARTY TIL"

Procedure for activating the operating modes “HOLIDAY TIL”, “ABSENT TIL” or “PARTY TIL”.

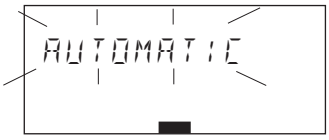


1

⇨ Tap the “Operating mode selection” key.

2

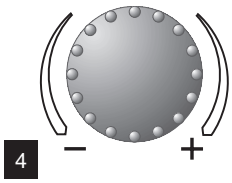
“OP. MODE” is displayed briefly.




3

The currently active operating mode is then shown flashing on the display.

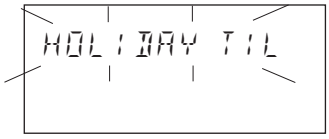
ⓘ A black rectangle in the lower section of the display points to the corresponding symbol!



4

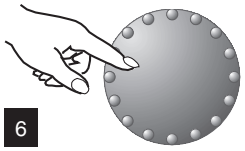
⇨ Set the desired operating mode by turning the “PUSH & TURN button”:

ⓘ "HOLIDAY TIL,"
"ABSENT TIL"
or "PARTY TIL."



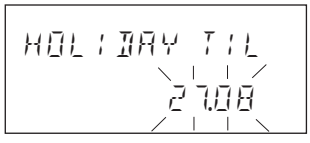

5

The selected operating mode (e.g. "HOLIDAY TIL") is shown flashing on the display.



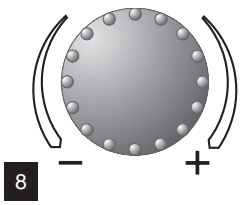
6

⇨ Tap the “PUSH & TURN button” to acknowledge the selected operating mode.




7

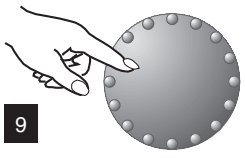
Today’s date (“HOLIDAY TIL”) or the current time (“ABSENT TIL”, “PARTY TIL”) is shown flashing on the display.



8

⇨ Turn the “PUSH & TURN button” and select:

ⓘ - for “HOLIDAY TIL”, the date on which you return from your holiday.
- for “ABSENT TIL”, the expected time of your return (within max. 24h).
- for “PARTY TIL”, the time the party is expected to end.



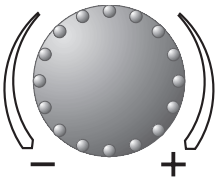
9

⇨ Tap the “PUSH & TURN button” to acknowledge the setting.

## 4.6.4 Changing the operating mode - for "AUTOMATIC," "SUMMER," "HEATING," "RED. HEATING" and "STANDBY"

Procedure for activating the operating modes “AUTOMATIC”, “SUMMER” , “HEATING”, “RED. HEATING” and “STANDBY”

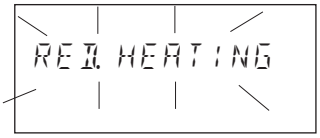
⇨ Follow the steps 1 to 3 described in Chapter 4.6.3 “Changing the operating mode”!




4

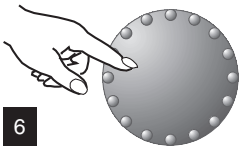
⇨ Set the desired operating mode by turning the “PUSH & TURN button”:

ⓘ "AUTOMATIC,"
"SUMMER,"
"HEATING,"
"RED. HEATING"
or "STANDBY."




5

The selected operating mode (e.g. "RED. HEATING") is shown flashing on the display.



6

⇨ Tap the “PUSH & TURN button” to acknowledge the setting.

## 4.7 Switching times (heating times)

ⓘ In this menu, the switching times programs can be set individually for the heating and DHW modes.

ⓘ The default heating times preset by the manufacturer are overwritten. However, you can restore the default times easily (see Chapter 4.10.5).

ⓘ It is possible to program up to 3 heating times per day.

ⓘ The switching times are only active when the “AUTOMATIC” mode is selected.

### 4.7.1 Standard heating times

| Circuit | Day | Heating from - to |
|---|---|---|
| All heating circuits (HC,MC-1,MC-2) | Mo-Su | 06.00 - 22.00 |
| Hot water circuit (DHW) | Mo-Su | 05.00 - 22.00 |

### 4.7.2 Table for recording individual switching times

Switching times program for living area..... (MC1)

| Day | Cycle 1 | | Cycle 2 | | Cycle 3 | |
|---|---|---|---|---|---|---|
| | from | to | from | to | from | to |
| Mo | | | | | | |
| Tu | | | | | | |
| We | | | | | | |
| Th | | | | | | |
| Fr | | | | | | |
| Sa | | | | | | |
| Su | | | | | | |

Switching times program for living area..... (MC2)

| Day | Cycle 1 | | Cycle 2 | | Cycle 3 | |
|---|---|---|---|---|---|---|
| | from | to | from | to | from | to |
| Mo | | | | | | |
| Tu | | | | | | |
| We | | | | | | |
| Th | | | | | | |
| Fr | | | | | | |
| Sa | | | | | | |
| Su | | | | | | |

Switching times program for living area..... (HC)

| Day | Cycle 1 | | Cycle 2 | | Cycle 3 | |
|---|---|---|---|---|---|---|
| | from | to | from | to | from | to |
| Mo | | | | | | |
| Tu | | | | | | |
| We | | | | | | |
| Th | | | | | | |
| Fr | | | | | | |
| Sa | | | | | | |
| Su | | | | | | |

Switching time program for calorifier (DHW)

| Day | Cycle 1 | | Cycle 2 | | Cycle 3 | |
|---|---|---|---|---|---|---|
| | from | to | from | to | from | to |
| Mo | | | | | | |
| Tu | | | | | | |
| We | | | | | | |
| Th | | | | | | |
| Fr | | | | | | |
| Sa | | | | | | |
| Su | | | | | | |

Further standard programs can be - or may already have been - set-up or enabled for programming by the installer
(P1-P3) see Page 23.

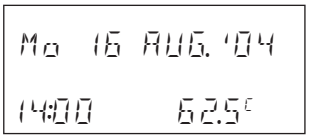
A maximum of 3 heating times per day are possible, e.g.:

... pro Tag
1 Heizzyklus!

... pro Tag
2 Heizzyklen!

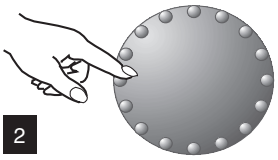
... pro Tag
3 Heizzyklen!

## 4.7.3 Changing the switching times (heating times)



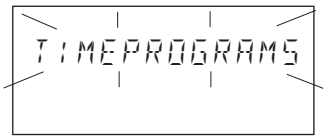

1

Start - Basic display



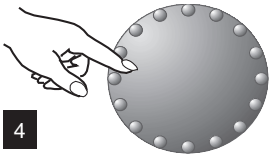
2

⇨ Press the “PUSH & TURN button” for at least 3 sec.



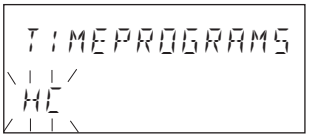

3

“TIMEPROGRAMS” is shown flashing on the display.



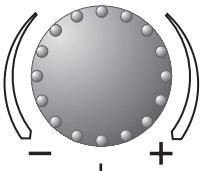
4

⇨ Tap the “PUSH & TURN button” to acknowledge the selected operating mode.




5

“HC” is shown flashing on the display

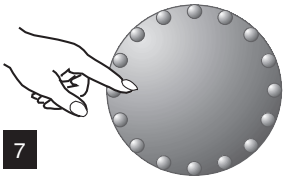



6

⇨ Select the desired heating circuit by turning the “PUSH & TURN button.”

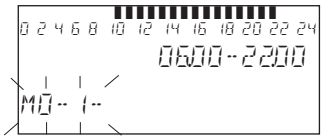
ⓘ if necessary, select switching time program P1, P2 or P3.

e.g.



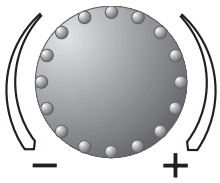
7

⇨ Tap the “PUSH & TURN button” to acknowledge the selected heating circuit.



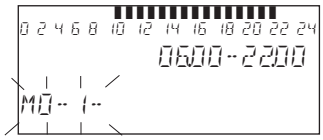

8

The first day of the week is shown flashing on the display.



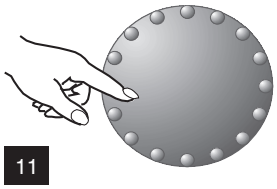
9

⇨ Turn the “PUSH & TURN button” until the desired day is displayed.



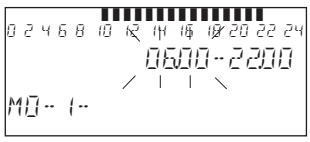

10

The selected day of the week is shown flashing on the display.



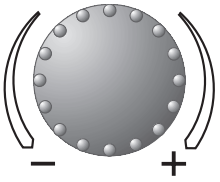
11

⇨ Tap the “PUSH & TURN button” to acknowledge the day.



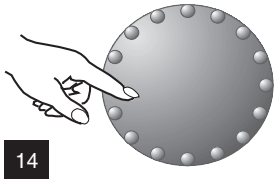

12

The heating start time is shown flashing on the display.



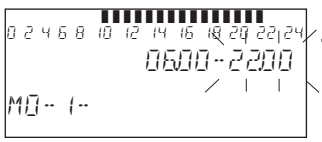
13

⇨ Set the desired heating start time by turning the “PUSH & TURN button.”



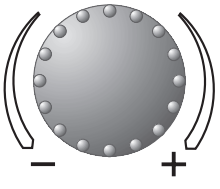
14

⇨ Tap the “PUSH & TURN button” to acknowledge the set start time.




15

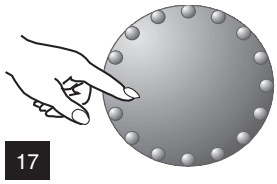
The heating end time is shown flashing on the display.



16

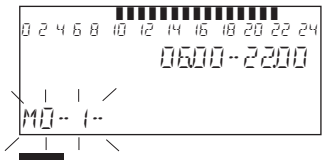
⇨ Set the desired heating end time by turning the “PUSH & TURN button.”

ⓘ Change the flashing value by turning the “PUSH & TURN button.”
Acknowledge by tapping the “PUSH & TURN button.”
Go back one step with .
Return to the starting point with or, automatically after approx. 60 sec.



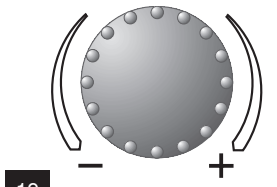
17

⇨ Tap the “PUSH & TURN button” to acknowledge the set end time.



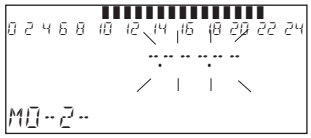
18

ⓘ After confirmation of the end time, the day of the week flashes again.



19

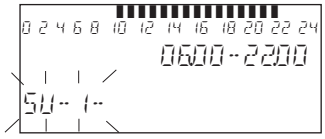
⇨ Turn the "Push & Turn" button to set a second heating time (Mo -2-).



20

Set the switching times as described for the previous heating circuits.

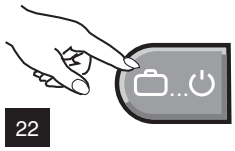
⇨ Keep turning to reach the following day.



21

Set the switching times as described for the previous days.

ⓘ You can also copy the switching times from other days (see Chapter 4.7.4).



22

⇨ Tap the “Operating mode selection” key to acknowledge the settings.

If P1 is displayed, it means that further standard heating time programs are already enabled.
If not, P2 and P3 can be enabled by the heating technician.

Factory setting:
Switching times program P2

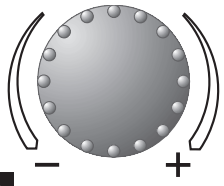
| Circuit | Day | Heating from |
|---|---|---|
| All heating circuits (HC,MC-1,MC-2) | Mo-Th<br>Fr<br>Sa-Su | 06.00-08.00 16.00-22.00<br>06.00-08.00 13.00-22.00<br>07.00-23.00 |
| Hot water circuit (DHW) | Mo-Th<br>Fr<br>Sa-Su | 05.00-08.00 15.30-22.00<br>05.00-08.00 12.30-22.00<br>06.00-23.00 |

Factory setting:
Switching times program P3

| Circuit | Day | Heating from |
|---|---|---|
| All heating circuits (HC,MC-1,MC-2) | Mo-Fr<br>Sa-Su | 07.00-18.00<br>reduced |
| Hot water circuit (DHW) | Mo-Fr<br>Sa-Su | 06.00-18.00<br>reduced |

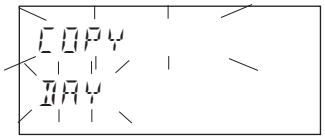
## 4.7.4 Copying switching times

⇨ Follow the steps 1 to 8 described in Chapter 4.7.3 “Changing the switching times”!



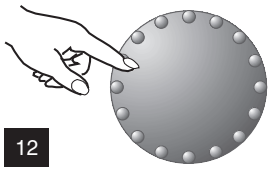
10

⇨ Select the “COPY”, “DAY” by turning the “PUSH & TURN button.”



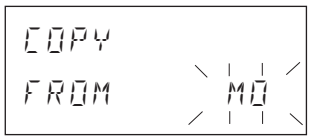

11

The settings flash on the display.



12

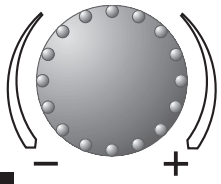
⇨ Tap the “PUSH & TURN button” to acknowledge the settings.




13

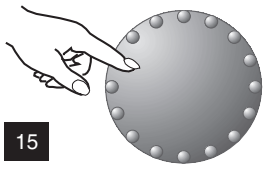
The selected setting value is shown flashing on the display.

ⓘ Change the flashing value by turning the “PUSH & TURN button.” Acknowledge by tapping the “PUSH & TURN button.” Go back one step with i . Return to the starting point with ⌂ or, automatically, after approx. 60 sec.



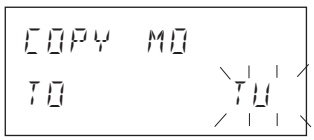
14

⇨ Select the day you want to copy by turning the “PUSH & TURN button”.



15

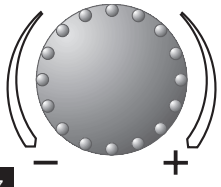
⇨ Tap the “PUSH & TURN button” to acknowledge the day.




16

The target day(s) is (are) shown flashing on the display.

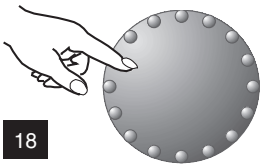
ⓘ Top line = value to copy
Bottom line = target



17

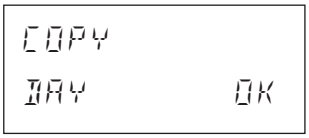
⇨ Select the desired value by turning the “PUSH & TURN button.”

ⓘ Days of the week: MO, TU....
Whole week: 1 - 7
Workdays: 1 - 5
Weekend: 6 - 7.



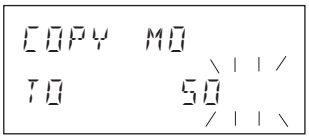
18

⇨ Tap the “PUSH & TURN button” briefly to acknowledge the setting.




19

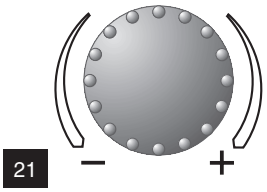
Confirmation for correct copying of day(s).




20

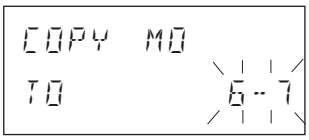
Target range for the next copy process is shown flashing on the display.

ⓘ The same value as in the preceding action is copied to the target range!




21

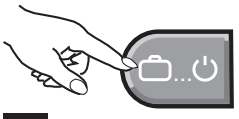
⇨ Select the next copy range by turning the “PUSH & TURN button.”




22

Target range for the copy process is shown again flashing on the display.

ⓘ Follow the same procedure to create any additional copies required.



23

⇨ Tap the “Operating mode selection” key to acknowledge the settings.

ⓘ The start display is shown (basic display).

## 4.8 Heating curve

### 4.8.1 Heating curve (heating characteristic curve)

ⓘ The heating curve describes the flow temperature of a heating system as a function of the outside temperature.

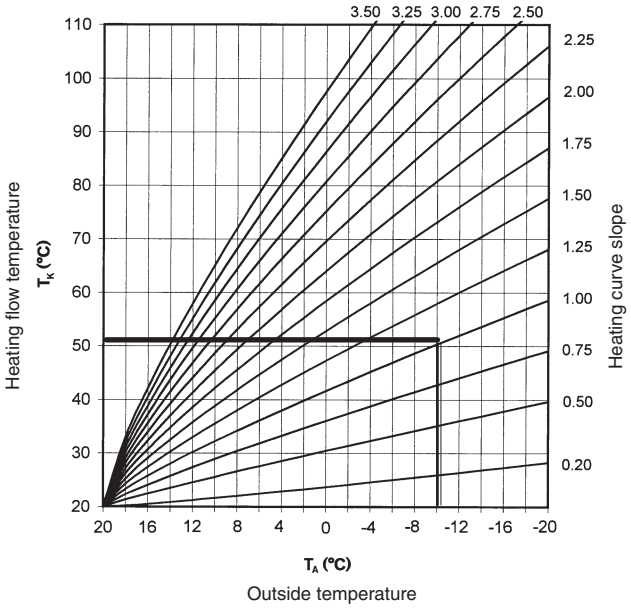
ⓘ The heating curve is preset by the installer *.

ⓘ Carry out temporary changes to the room temperature settings via the “Daytime room temperature” or “Reduction temperature.”

ⓘ The heating characteristic curve settings should only be changed if the room temperature is not reached over a longer period of time during the heating period.

Recommended settings:

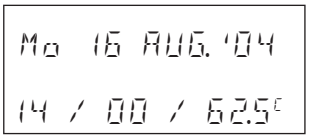
| | |
|---|---|
| Underfloor heating: | 0.3 to 0.8 |
| Radiator heating: | 1.0 to 2.0 |
| Convector heating: | 1.4 to 2.0 |




Example:
You have set the system to radiator heating and a heating curve slope of 1.0. At an outside temperature of -10°C, this results in a flow temperature of approx. 52°C if a temperature of 20°C is required.

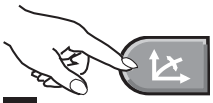
* Info :
The heating curve for the direct circuit is set to OFF by default. The direct heating circuit is activated automatically by setting a value.

## 4.8.2 Changing the heating curve (heating characteristic curve)



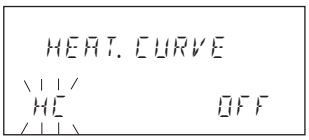

1

Start - Basic display



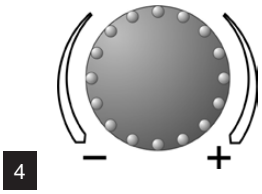
2

⇨ Tap the "Heating characteristics“ key.



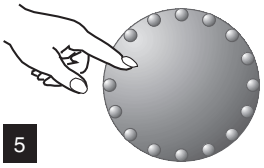

3

"Heating curve“ - display appears, "HC“ flashes



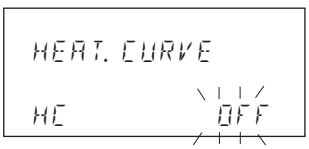

4

⇨ Select the desired heating circuit by turning the “PUSH & TURN button.”



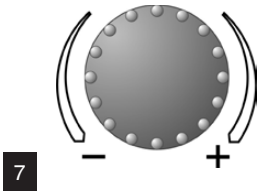
5

⇨ Tap the “PUSH & TURN button” to acknowledge.



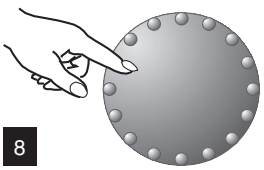

6

The slope of the heating characteristic curve is shown flashing on the display, or OFF if the selected heating circuit is not connected



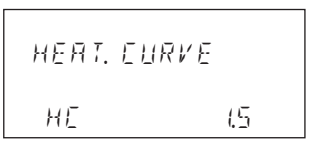

7

⇨ Set the desired slope of the heating characteristic curve by turning the “PUSH & TURN button.”



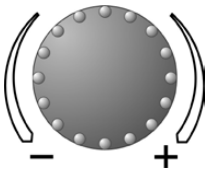
8

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.




9

The selected slope of the heating characteristic curve is shown.



1

⇨ Turn the PUSH & TURN button to set further heating circuits...

2

“Heating curves” appears again on the display.

ⓘ For example “MC” (flashing).

3

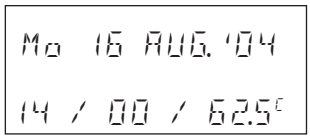
⇨ Tap the “Operating mode selection” key to acknowledge the settings.

ⓘ The start display is shown (basic display).

---

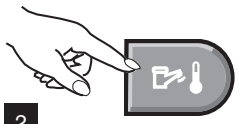
## 4.9 Hot water

### 4.9.1 Setting the domestic hot water temperature



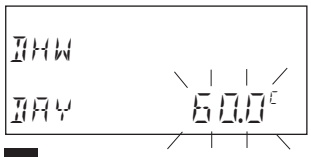

1

Start - Basic display



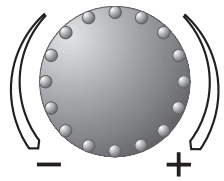
2

⇨ Tap the “Hot water temperature” key.




3

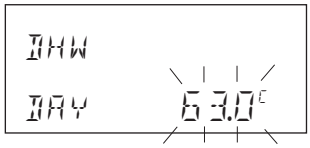
The currently set hot water temperature is shown flashing on the display.



4

⇨ Set the desired hot water temperature by turning the “PUSH & TURN button.”

ⓘ Setting range 10 - 65°C
Factory setting 60°C




5

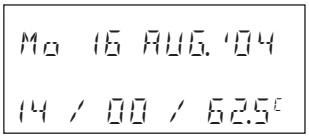
The selected hot water temperature flashes.

6

⇨ Tap the “Domestic hot water temperature” key to acknowledge the temperature setpoint.

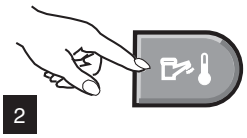
### 4.9.2 Manual DHW re-charging

In the case of increased hot water demand, it is possible to conduct a temporary additional heat-up of the calorifier. The calorifier is then re-charged once according to the set daytime hot water temperature.



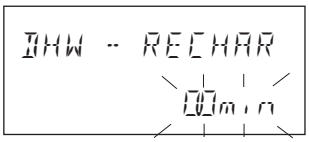

1

Start - Basic display



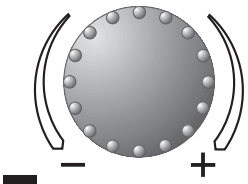
2

⇨ Press and hold the “Hot water temperature” key for 3 seconds.




3

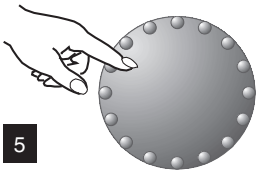
The additional DHW charging time is displayed; the minutes display flashes.




4

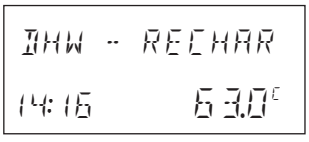
⇨ Set the desired additional charging time by turning the “PUSH & TURN button.”

ⓘ Setting range 0 - 240 min.



5

⇨ Tap the “PUSH & TURN button” to acknowledge the setting.

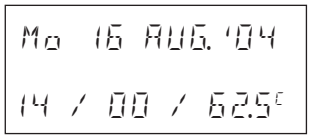



6

The selected additional charging time is shown.

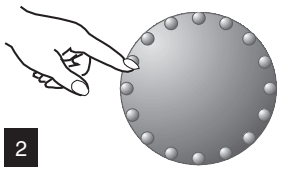
ⓘ The information on the display disappears when re-charging is completed.

## 4.9.3 Domestic hot water economy temperature (reduced temperature)



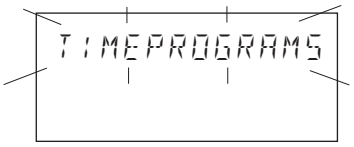

Start - Basic display

1



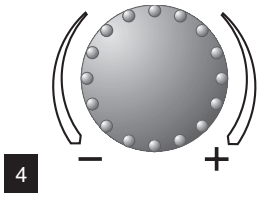
2

⇨ Press the “PUSH & TURN button” for 3 seconds.




3

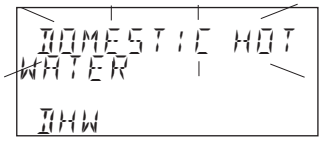
“Switching times” is shown flashing on the display.




4

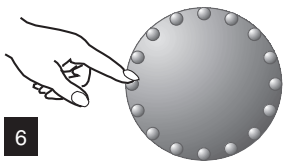
⇨ Change the DHW setting by turning the “PUSH & TURN button.”

ⓘ Setting range 0 - 240 min.



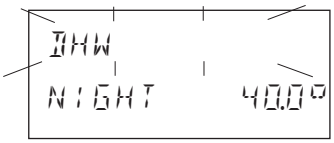

5

"DHW" flashes on the display.



6

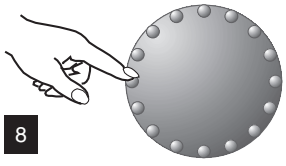
⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.




7

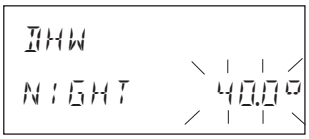
“DHW” is shown flashing on the display again.

ⓘ The temperature shown corresponds to the set reduced DHW temperature.



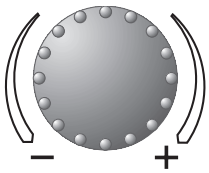
8

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.



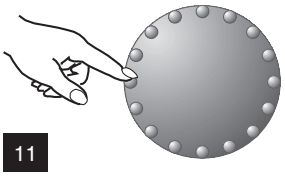

9

The reduced night-time DHW temperature flashes.




10

⇨ Select the desired temperature value by turning the “PUSH & TURN button.”



11

⇨ Tap the “PUSH & TURN button” to acknowledge the setting.

12

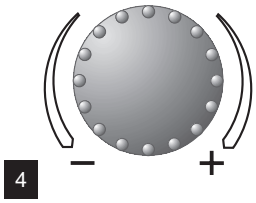
⇨ Tap the “Operating mode selection” key.

ⓘ The start display is shown (basic display).

## 4.10 Further settings

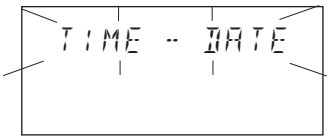
### 4.10.1 Setting the clock

⇨ Follow the steps 1 to 3 described in Chapter 4.9.3 “Domestic hot water economy temperature”!



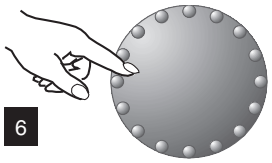

4

⇨ Select “Time-date” by turning the “PUSH & TURN button.”



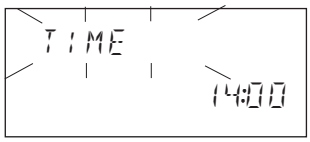

5

“Time-date” is shown flashing on the display.



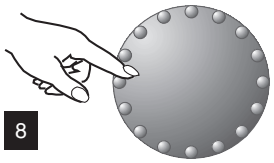
6

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.




7

“Time” is shown flashing on the display.

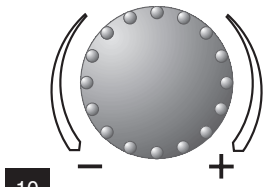


8

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.

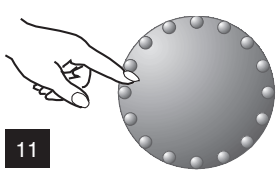
9

The “time” is shown flashing on the display.




10

⇨ Set the desired time by turning the “PUSH & TURN button.”



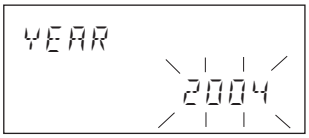
11

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.

ⓘ Return to the starting page and save the set values with .

ⓘ Turn the "PUSH & TURN button“ to make further settings.

## 4.10.2 Setting the date




12

“Year” is shown flashing on the display - acknowledge.

⇨ Change the year setting by turning the “PUSH & TURN button” - acknowledge.

ⓘ Continuation of ”Setting the clock” (Chapter 4.10.1).

13

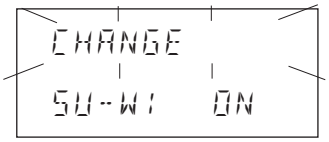
“Day...Month” is shown flashing on the display - acknowledge.

⇨ Change the Day...Month setting by turning the “PUSH & TURN button” - acknowledge.

ⓘ Return to the starting page and save the set values with .

ⓘ Turn the "PUSH & TURN button“ to make further settings.

## 4.10.3 Changing between summer and winter time




14

“Change” is shown flashing on the display - acknowledge.

⇨ Change SU-WI ON or OFF by turning the “PUSH & TURN button” - acknowledge.

ⓘ Continuation of ”Setting the date” (Chapter 4.10.2).

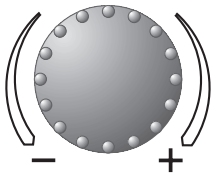
15

⇨ Tap the “Operating mode selection” to acknowledge the selected summer / winter time and to open the basic display.

## 4.10.4 Setting the language

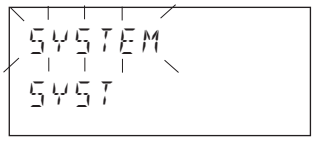
Follow the steps 1 to 3 described in Chapter 4.9.3 “Domestic hot water economy temperature”!

ⓘ You will be prompted for the desired language when switching on the control system for the first time. Changing the language is also possible during normal operation.



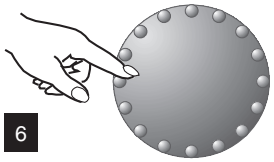
4

⇨ Select “System” on the display by turning the “PUSH & TURN button.”



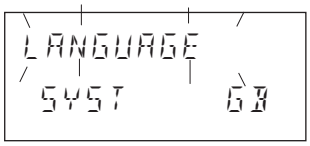

5

“System” is shown flashing on the display.



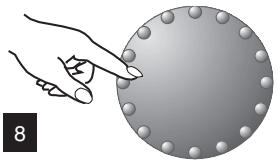
6

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.



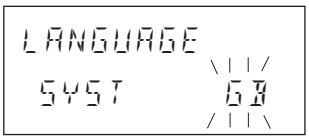

7

“Language” is shown flashing on the display



8

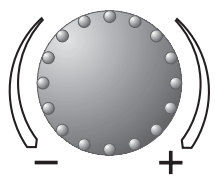
⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.




10

Language is displayed - abbreviations for the language are shown flashing.

ⓘ DE = German
GB = English
FR = French
IT = Italian
etc.



11

⇨ Turn the “PUSH & TURN button” to select the desired language and tap to acknowledge.

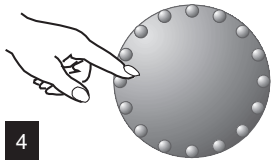
12

⇨ Tap the “Operating mode selection” key to acknowledge the settings and to open the basic display.

## 4.10.5 Reloading the standard switching times program - Deleting your own time program

ⓘ This function allows you to reset all values preset at the factory!

Follow the steps 1 to 3 described in Chapter 4.9.3 “Domestic hot water economy temperature”!

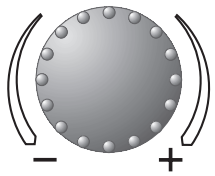


4

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.

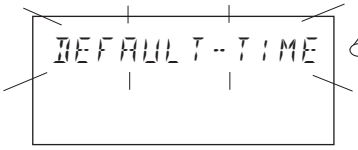
5

The letters “HC” are shown flashing on the display.



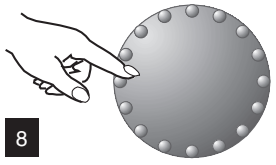

6

⇨ Select "Default times" by turning the "PUSH & TURN" button.



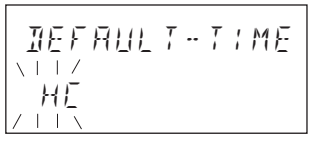

7

“Default-time” is shown flashing on the display..



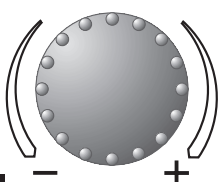
8

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.



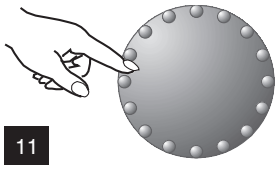

9

The letters “HC” are shown flashing on the display.



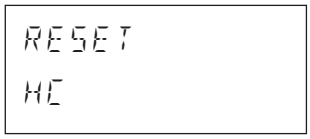

10

⇨ Select the desired heating circuit by turning the “PUSH & TURN button.”



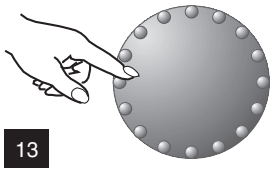
11

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.




12

“Reset / HC” is displayed.



13

⇨ Press and hold the “PUSH & TURN button” for 3 sec.

14

"Reset / OK" is displayed to acknowledge.

15

⇨ Tap the “Operating mode selection” key to acknowledge the new settings and to open the basic display.

## 4.10.6 Manual operation

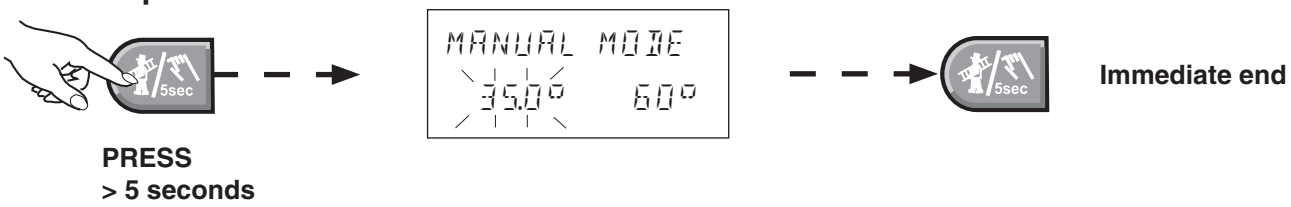
**The following information is intended for the heating technician only**

**This function key is also used for emission measurement when it is only pressed briefly.**
**- See installation instructions; combustion control**

All pumps are operating without restrictions. Available mixers are disconnected and can be operated manually, if necessary, depending on the heat demand.

**WARNING:**
- The DHW temperature can reach the level of the boiler temperature set-point.
  Danger of scalding if temperature setting is too high !
- To protect underfloor heating systems against impermissible overheating during manual operation, it is necessary to implement appropriate safety measures (e.g. safety temperature limiter with pump switch-off).

### Manual operation

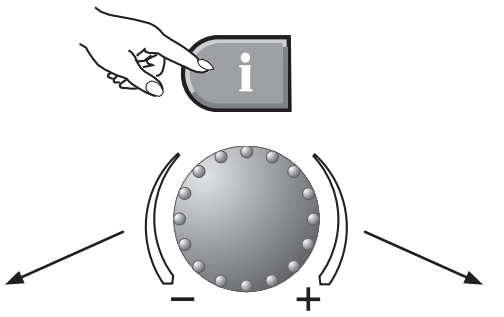



**REACTIONS** for manual operation
- **Set desired boiler temperature with button!**
- All heating pumps ON
- Mixer without current - manual setting necessary!
- Note the maximum permissible temperature of the panel heating!
- The hot water temperature reaches the set DHW maximum temperature (service engineer level standard 65°C).

**Note:**
You can exit manual operating mode and emission measurement mode at any time by tapping the operating mode selection key (Return to basic display).

## 4.11 System information

### 4.11.1 Information key for system temperatures and heating circuit information




Actual values

Outside temperature

OUTSIDE 7.5°

Heat generator temperature

HEAT GENER. 64.5°

Exhaust

EXHAUST 50°

Modulation

MODULATION 30

Domestic hot water temperature

DHW 55°

Flow temperature

FLOW 55°

Heat generator Starts

STARTS 0

Heat generator hours of operation

OPER. HOURS 0h

ⓘ All temperature values shown represent the current values. Press and hold the "PUSH & TURN button" to display the individual set value.

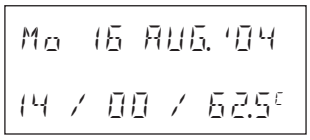
In certain cases, additional information may be displayed.

only in conjunction with room sensor:
- Room temperature direct HC
- Room temperature MC 1
- Room temperature MC 2

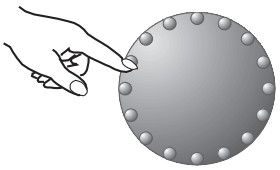
ⓘ Back to the start screen: Press briefly i

## 4.11.2 Information on the boiler status

Viewing the current status of the heat generator.

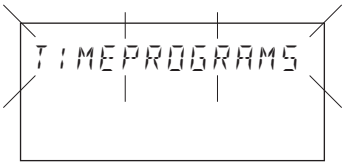



Start - Basic display



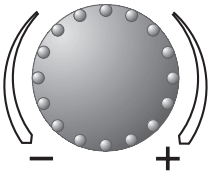
1

⇨ Press the “PUSH & TURN button” for 3 seconds.



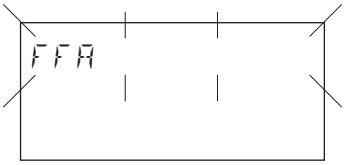

2

☞ “Switching times” is shown flashing on the display.



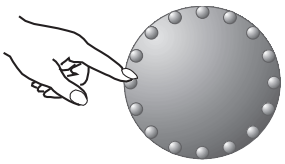

3

⇨ Select "FFA" by turning the "PUSH & TURN button."



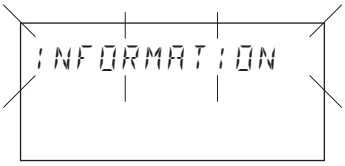

4

☞ “FFA” is shown flashing on the display.



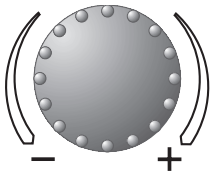
5

Tap the “PUSH & TURN button” to acknowledge the selected value.



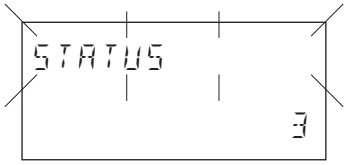

6

☞ “INFORMATION” is shown flashing on the display.



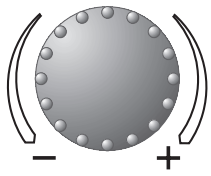
7

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.




8

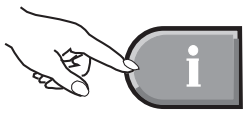
“STATUS” is shown flashing on the display.



9

Turn the "PUSH & TURN button" to find the following values:

| | | |
|---|---|---|
| STATUS | Boiler status | |
| | 0 Burner OFF, Quiescent state | The burner is off and the boiler is in standby mode. |
| | 1 Ignition phase | Burner is filled with pellets and ignition takes place via hot air fan. |
| | 2 Fire-bed build-up | A stable fire-bed is built up in the burner and the output increased step by step |
| | 3 Normal operation with modulating output | Modulating operation, adjustment of the burner output to the required heat demand |
| | 5 BURN-OUT | Burner is switched off and the fire-bed burns out after the setpoint temperature is reached or in order to refill the pellet hopper. |
| | 6 Fault | Burner fault is active (see Chapter 5). |
| MODULATION | Modulation | |
| BOILER | Boiler delivery flow temperature | |
| BRU ACT | Return temperature | |
| BUFFER | Buffer temperature | |
| FLUE GAS | Flue gas temperature | |
| COM.-CHAMBER | Combustion chamber temperature | |
| INSERT-SCREW | Stoker/feeder screw temperature | |
| CONSUMPTION 1 | Consumption meter 1 | |
| CONSUMPTION 2 | Consumption meter 2 | |

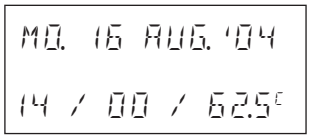



10

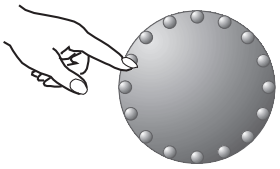
Tap the "Information" key three times.

ⓘ The start display is shown (basic display).

## 4.11.3 Displaying and resetting the consumption meters and cleaning messages

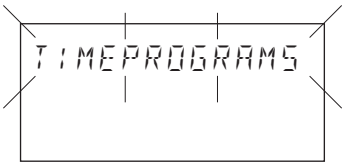



Start - Basic display



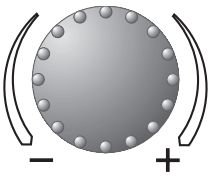
1

⇨ Press the “PUSH & TURN button” for 3 seconds.



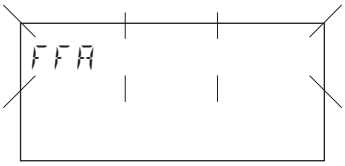

2

“TIMEPROGRAMS” is shown flashing on the display.



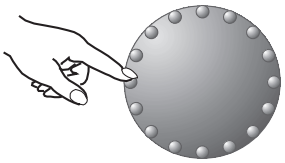
3

⇨ Select "FFA" by turning the "PUSH & TURN button."



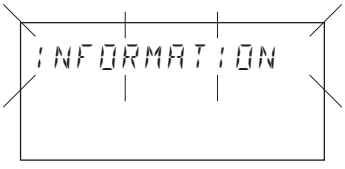

4

“FFA” is shown flashing on the display.



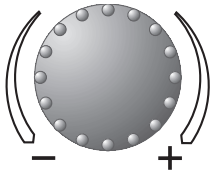
5

Tap the “PUSH & TURN button” to acknowledge the selected value.



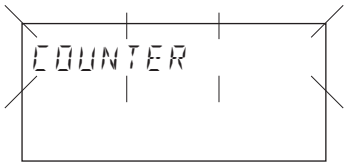

6

“INFORMATION” is shown flashing on the display.



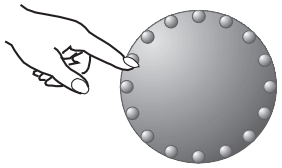
7

⇨ Select "COUNTER" by turning the "PUSH & TURN button."



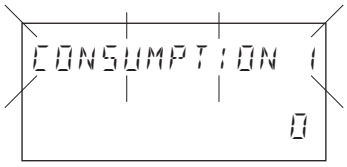

8

"COUNTER" is shown flashing on the display.



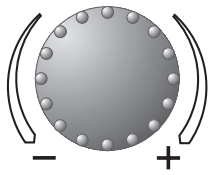
9

⇨ Tap the "PUSH & TURN button" to acknowledge the selected value.




10

"CONSUMPTION 1" is shown flashing on the display.



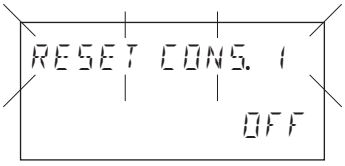

11

⇨ Turn the "PUSH & TURN button" to find the following values:

| **Viewing the consumption meters** | |
|---|---|
| CONSUMPTION 1 | Pellet consumption for period:<br>Pellet consumption since the last pellet delivery or over a specific period. |
| CONSUMPTION 2 | Total pellet consumption:<br>Pellet consumption since the last commissioning of the system. |
| ASHBOX | Pellet consumption since the last time the ash box was emptied. |

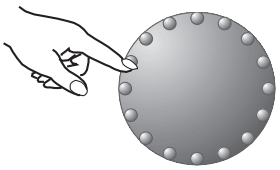
| **Resetting consumption meters / cleaning message** | |
|---|---|
| RESET CONS. 1 | Resets consumption meter 1 or the pellet consumption within a specific period of time. |
| RESET CONS. 2 | Resets consumption meter 2 or the pellet consumption since the last commissioning of the system. |
| RESET ASHBOX | Resets cleaning message W:40 or Empty ash box.<br><br>The cleaning message is issued after a pellet throughput of:<br>4 tons for type BioLyt (50-75)<br>9 tons for type BioLyt (110-160) |
| RESET CLEAN | Resets cleaning message W:41 or Clean boiler and burner.<br><br>The cleaning message is issued after a pellet throughput of:<br>6 tons for BioLyt (50)<br>8 tons for BioLyt (70,75)<br>12 tons for BioLyt (100,110)<br>15 tons for BioLyt (130)<br>18 tons for BioLyt (150,160) |

As an example, the procedure for resetting consumption meter 1 is described from step 12 onwards.



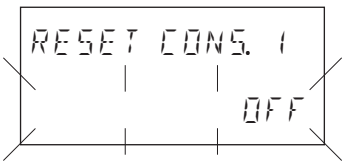

12

"RESET CONS. 1" is shown flashing on the display.



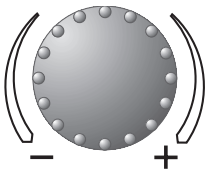
13

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.



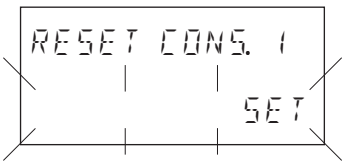

14

“OFF” is shown flashing on the display.



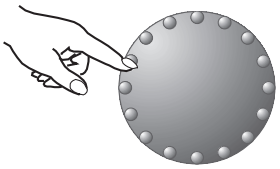

15

⇨ Select "SET" by turning the "PUSH & TURN button."



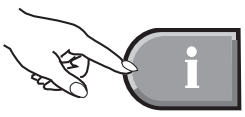

16

“SET” is shown flashing on the display.



17

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.

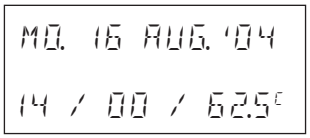



18

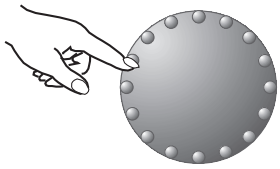
⇨ Tap the "Information" key three times.

ⓘ The start display is shown (basic display).

## 4.11.4 Changing off-periods for the extraction system

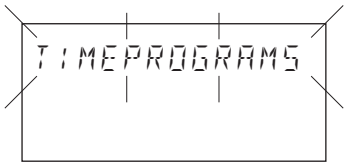



Start - Basic display



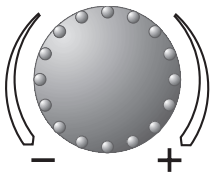
1

⇨ Press the “PUSH & TURN button” for 3 seconds.



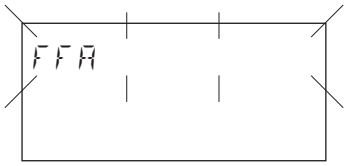

2

“TIMEPROGRAMS” is shown flashing on the display.



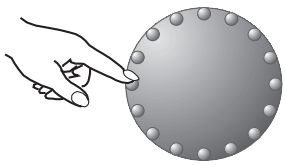

3

⇨ Select "FFA" by turning the "PUSH & TURN button."



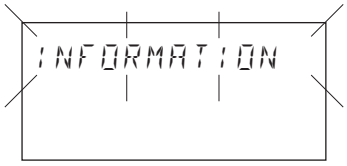

4

“FFA” is shown flashing on the display.



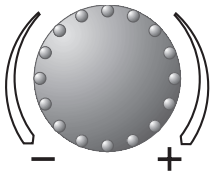
5

Tap the “PUSH & TURN button” to acknowledge the selected value.



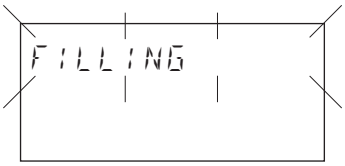

6

“INFORMATION” is shown flashing on the display.



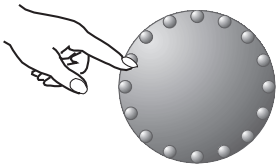

7

⇨ Select "FILLING" by turning the "PUSH & TURN button."



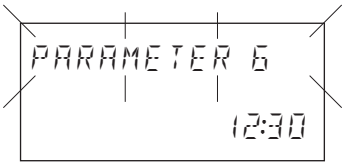

8

"FILLING" is shown flashing on the display.



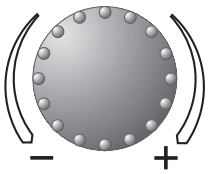
9

⇨ Tap the "PUSH & TURN button" to acknowledge the selected value.




10

"PARAMETER 6" is shown flashing on the display.

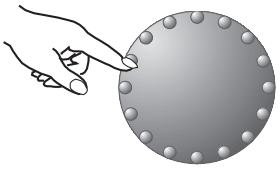



11

⇨ Turn the "PUSH & TURN button" to find the following values:

| Changing the off-periods | | Time |
|---|---|---|
| PARAMETER 6 | Begin filling off-period 1 | 12:30 |
| PARAMETER 7 | End filling off-period 1 | 15:30 |
| PARAMETER 8 | Begin filling off-period 2 | 21:30 |
| PARAMETER 9 | End filling off-period 2 | 08:00 |

The extraction system can be disabled during two periods of time per day. You will find preset values in the table "Changing the off-periods" That is, the extraction system is disabled from 12.30 to 14.30 and from 21.30 to 8.00.

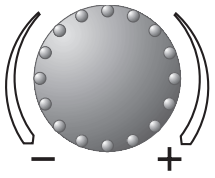


12

⇨ Tap the "PUSH & TURN button" to acknowledge the selected value.

13

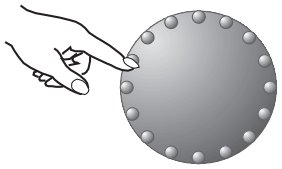
Time "12:30" is shown flashing on the display.




14

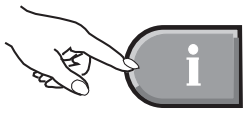
⇨ Set the desired time by turning the “PUSH & TURN button.”

ⓘ Repeat steps 11-15 if you wish to enter further off-periods.



15

⇨ Tap the “PUSH & TURN button” to acknowledge the selected value.

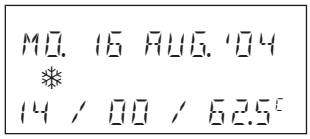



16

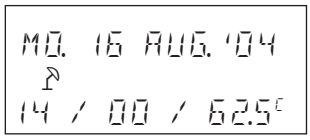
⇨ Tap the "Information" key three times.

ⓘ The start display is shown (basic display).

### 4.11.5 Special symbols




Ice crystal symbol:
System frost protection activated

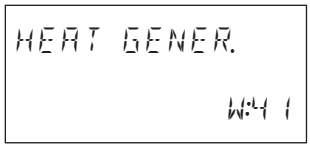



Sunshade symbol:
Summer disconnection active (heating switched off, DHW according to program).

Cleaning the ash box:
Empty the ash box and then reset counter "RESET ASHBOX"

BioLyt (50-75)
Cleaning (Chapter 7.3)
Reset counter (Chapter 4.11.3)

BioLyt (100-160)
Cleaning (Chapter 8.3)
Reset counter (Chapter 4.11.3)

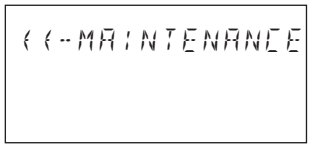



Cleaning the boiler:
Clean boiler and burner and then reset counter "RESET CLEAN"

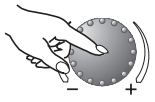
BioLyt (50-75)
Cleaning (Chapter 7.3)
Reset counter (Chapter 4.11.3)

BioLyt (100-160)
Cleaning (Chapter 8.3)
Reset counter (Chapter 4.11.3)

### 4.11.6 Maintenance message




Maintenance message (optional):
If the display shows the basic display alternating with the maintenance prompt, call customer service. To temporarily suppress this message, press the Manual mode/Emission key and acknowledge according to the display "RESET SET" by pressing the PUSH & TURN button for 3 seconds.



## 4.11.7 Optional accessories

**Room station RS-T**

The Room station RS-T offers additional operating convenience through decentralised monitoring and intervention options, since every heating circuit can be assigned with its own individual room station.
Moreover, the central unit contains various control and regulating functions which can only be activated in conjunction with a room station. These include:

- Optimisation functions
- Automatic heating curve adaptation

System-specific temperatures and switching times can be checked and modified via five control keys, also allowing the definition of individual system programs.
The operation of the room station and the boiler control unit is identical.

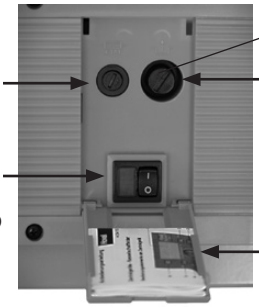
**Remote setting device with room sensor RFF-T**

This auxiliary device monitors the current room temperature and allows the desired room temperature to be corrected.
With the integrated operating mode key, you can select continuous heating, reduced heating or automatic mode according to a preset automatic program stored in the central unit.

# 5. Fault repair

## 5.1 Blocking switch and reset button

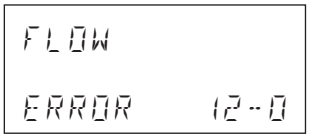
ⓘ The controller comprises a comprehensive alarm logic which displays the fault type by means of the corresponding error code, depending on the unit version.




Press the Reset button under the hinged cover if the display shows “Error.” If this happens frequently, notify your Customer Service centre.

For further information, see the overview of alarms (Chapter 5.4/ 5.5).

## 5.2 Display of heating regulator alarms

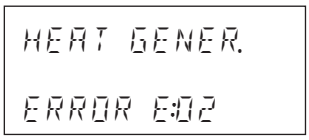



Example of sensor alarms (short-circuit or interruption)
Error code 10-20 and index 0 or 1

see Chapter 5.4

## 5.3 Display of boiler controller alarms

If the display shows a fault message with "HEAT GENER",
a boiler malfunction has occurred.




Example of pellet boiler alarms (interruption/ short-circuit flue gas sensor)

see Chapter 5.5

## 5.4 Overview of alarms, heating regulator TopTronic®T

| Status | Designation | Fault type | Code | Remark |
|---|---|---|---|---|
| System | External sensor | Interruption | 10-0 | |
| System | External sensor | Short-circuit | 10-1 | |
| System | Boiler sensor | Interruption | 11-0 | |
| System | Boiler sensor | Short-circuit | 11-1 | |
| System | Flow sensor 1 | Interruption | 12-0 | MC1=off, YK1=no current |
| System | Flow sensor 1 | Short-circuit | 12-1 | MC1=off, YK1=no current |
| System | Storage sensor | Interruption | 13-0 | |
| System | Storage sensor | Short-circuit | 13-1 | |
| System | VE 2 | Interruption | 14-0 | |
| System | VE 2 | Short-circuit | 14-1 | |
| System | VE 2 | Alarm | 14-7 | |
| System | VE 3 | Interruption | 15-0 | |
| System | VE 3 | Short-circuit | 15-1 | |
| System | VE 3 | Alarm | 15-7 | |
| System | VE 1 | Interruption | 16-0 | |
| System | VE 1 | Short-circuit | 16-1 | |
| System | VE 1 | Alarm | 16-7 | |
| System | Solar tank sensor | Interruption (KSPF) | 17-0 | |
| System | Solar tank sensor | Short-circuit (KSPF) | 17-1 | |
| System | Flow sensor 2 | Interruption | 18-0 | MC2=off, YK2=no current |
| System | Flow sensor 2 | Short-circuit | 18-1 | MC2=off, YK2=no current |
| System | Collector sensor | Interruption (KVLF) | 19-0 | |
| System | Collector sensor | Short-circuit (KVLF) | 19-1 | |
| System | Room sensor (RS) | Interruption | 20-0 | |
| System | Room sensor (RS) | Short-circuit | 20-1 | |
| System | Burner 1 | No switching off (1 min) | 30-2 | With par. log. alarm can be switched off |
| System | Burner 1 | No switching on (10 min) | 30-3 | With par. log. alarm can be switched off |
| System | Burner 2 | No switching off (1 min) | 31-2 | With par. log. alarm can be switched off |
| System | Burner 2 | No switching on (10 min) | 31-3 | With par. log. alarm can be switched off |
| System | Exhaust gas temperature | Exceeding | 33-5 | |
| System | Exhaust gas temperature | SLT triggered | 33-8 | |
| System | Cleaning stage 1 | Triggering by date | 40-1 | |
| System | Cleaning stage 1 | Triggering by interval | 40-2 | |
| System | Cleaning stage 1 | Triggering by counter | 40-4 | |
| System | Maintenance stage 1 | Triggering by date | 41-1 | |
| System | Maintenance stage 1 | Triggering by interval | 41-2 | |
| System | Maintenance stage 1 | Triggering by counter | 41-4 | |
| System | Cleaning stage 2 | Triggering by date | 42-1 | |
| System | Cleaning stage 2 | Triggering by interval | 42-2 | |
| System | Cleaning stage 2 | Triggering by counter | 42-4 | |
| System | Maintenance stage 2 | Triggering by date | 43-1 | |
| System | Maintenance stage 2 | Triggering by interval | 43-2 | |
| System | Maintenance stage 2 | Triggering by counter | 43-4 | |

| Status | Designation | Fault type | Code | Remark |
|---|---|---|---|---|
| Logical | Boiler temperature | Not reached (90 min) | 50-4 | |
| Logical | Tank temperature | Not reached (4 h) | 51-4 | |
| Logical | Flow temperature MC1 | Not reached (1 h) | 52-4 | |
| Logical | Flow temperature MC2 | Not reached (1 h) | 53-4 | |
| Logical | Room temperature HC | Not reached (3 h) | 54-4 | |
| Logical | Room temperature MC1 | Not reached (3 h) | 55-4 | |
| Logical | Room temperature MC2 | Not reached (3 h) | 56-4 | |
| System | Lock by energy supply company ST 2 | Address collision | 70-0 | |
| System | Activity | No T2B signal | 70-1 | |
| System | Activity | No FA signal | 70-6 | |
| System | Activity | Regulator with address 10 is missing | 70-8 | |
| System | Activity | Data bus error | 70-9 | No Hoval regulator |
| System | HP return sensor | Return min. temp. below setpoint | 85-4 | |
| System | HP return sensor | Return max. temp. exceeded | 85-5 | |
| System | QF | Heat source min. temp. below setpoint | 86-4 | |
| System | QF | Heat source max. temp. exceeded (cooling operation) | 86-5 | |
| System | QF | Fault heat source sensor | -- | Standard signal «VE-x» |
| System | WPS | Variable input HP fault | 87-7 | |
| System | Pulse counter | No pulse (5 min) | 90-0 | |
| System | Fault | Warning | W:XX | Warning in automatic firing device |
| System | Fault | Lock-out | E:XX | Fault in automatic firing device |
| System | Fault | Blocking | B:XX | Fault in automatic firing device |

## 5.5 Overview of alarms, boiler controller

| Error code | Description | What should be done? |
|---|---|---|
| **E(01)** | STL (safety temperature limiter) | 1. Boiler STL has tripped:<br>To unlock, remove the cover on the controller box. Press in the button. Acknowledge the fault by pressing the reset button<br>2. Burn-back STL has tripped:<br>To unlock, remove the cover of the STL on the down-pipe and press in the button. Acknowledge the fault by pressing the reset button |
| **E:02/ E:03** | Interruption/short-circuit, flue gas sensor | Contact Hoval specialist |
| **E:04/ E:05** | Interruption/ short-circuit, combustion chamber sensor | Contact Hoval specialist |
| **E:06/ E:07** | Interruption, boiler sensor | Contact Hoval specialist |
| **E:12** | Feed signal, stoker/feeder screw:<br>screw at a standstill | Contact Hoval specialist |
| **E:13/ E:14** | Interruption/ short-circuit, burn-back sensor | Contact Hoval specialist |
| **E:15** | Burn-back | Clean burner (see Chapter "Cleaning and maintenance“), if fault occurs repeatedly, contact Hoval specialist |
| **E:16** | Number of start attempts exceeded<br>(minimum combustion chamber temperature not reached after fire-bed build-up) | Contact Hoval specialist |
| **E:29** | Vacuum not OK | Clean burner and boiler (see Chapter "Cleaning and maintenance“), if fault occurs repeatedly at short intervals, contact Hoval specialist |
| **E:31** | Ball valve not closing/opening | Contact Hoval specialist |
| **E:33** | Ignition not successful<br>(no increase in combustion chamber temperature during the ignition process) | Clean burner (see Chapter "Cleaning and maintenance“), if fault occurs repeatedly, contact Hoval specialist |
| **E:37** | Filling time exceeded,<br>but pellet hopper is empty | 1. Check whether there are pellets left in the storage room<br>2. Check whether the suction hoses are clogged with pellets at some point<br>Otherwise: contact Hoval specialist. |
| **E:38** | Filling process aborted due to:<br>1. Screw motor overheating<br>or<br>2. Door contact switch (if fitted) opened<br>or<br>3. Max. number of filling attempts exceeded<br>(only possible if suction system is equipped with negative pressure monitor) | 1./ 3.: Check suction hoses and screw transfer station for blockages and remove if necessary.<br>2. Close the door to the storage room |
| **E:50** | Internal control error | Contact Hoval specialist |
| **B:20** | Maximum boiler temperature exceeded | |
| **B:21** | Blocking switch active | Burner is switched off and blocked. |
| **B:32** | Filling level sensors, wrong signal order | 1. Check pellet hopper for bridging (lower sensor is "in the open“ although the upper sensor is still covered with material) as a result of too much dust in the fuel<br>2. Empty pellet hopper and clean it, remove dust from the sensors<br>3. Otherwise: contact Hoval specialist |
| **B:34** | Value measured by the lambda probe does not recover | |
| **W:08/ W:09** | Interruption/ short-circuit, return sensor | Contact Hoval specialist |
| **W:10/ W:11** | Interruption/short-circuit burner buffer sensor<br>(if fitted) | Contact Hoval specialist |
| **W:17** | Filling time exceeded | 1. Check whether pellets are available in the storage room<br>2. Check if pellets are blocking the suction hoses<br>Otherwise: contact Hoval specialist. |
| **W:18** | Storage room empty<br>(only if filling level sensor is fitted in the storage room) | Order pellets |
| **E:19/ W:19** | Lambda probe test failed | |
| **W:22** | Filling blocked through off-period | |
| **W:23** | Fire-bed extinguished during operation | |
| **E:24/ W:24** | Lambda probe test aborted as a result of flue gas temperature | |
| **W:30** | Low vacuum (10% increase active) | |
| **W:40** | Empty ash box | Empty ash box and reset counter; see Page 63 |
| **W:41** | Boiler cleaning necessary | Clean boiler and burner and reset counter |
| **W:42** | only with manual filling without automatic filling system: pellet hopper empty | Re-fill pellets |

## 5.6 Checklist in case of faults

| Fault | Check/cause | Remedy | Chapter |
|---|---|---|---|
| **Pellet boiler does not start up** | - Is power supply present | - Check fuses. Turn on main switch | |
| | - Is the red fault indiactor lit | - Press reset button (12)<br>- Contact customer service | 4.4.4 |
| **Radiators do not heat up** | - Are the slide valves in the heating flow and return open | - Open them | |
| | - Is the TopTronic®T timer set correctly | - Check as described in operating manual for the heating regulator | 4.7 |
| | - Check water level and pressure | - Top up and vent heating | |
| | - Are the radiator valves open | - Open them | |
| | - The heating circulation pump is not running | - Open locking screw<br>Turn end of shaft vigorously with a screw-driver until there is no longer resistance | |
| | - Mixer does not open automatically | - Open manually; call customer service | |
| **No hot water** | - The charging pump is not running | - Unscrew the locking screw<br>Turn shaft end vigorously with a screwdriver until there is no longer resistance | |
| | - Is there air in the charging line | - If necessary, vent by hand<br>- Operate automatic air vent manually | |

**Please note!**

Please use the above checklist when carrying out the checks in the case of malfunctions.

**If you are not able to resolve the fault, please contact the heating engineer or Hoval Customer Service.**

# 6. Checking the water level

**If the system pressure is too low (check pressure gauge), inform your installer or top it up with water.**

**Refilling the heating system**

The heating system can normally be filled and topped up with mains water. In exceptional cases, the water quality may vary strongly and it might not always be suitable for filling the heating system (highly corrosive or very hard water). Please contact a certified specialist company in such cases.

Follow the procedure below

- Set main switch to "O."
- The shut-off valves in the flow and return lines must be open.
- The boiler filling and drain cock is accessible after removing the cover on the front of the boiler.
- Connect a hose between the filling cock and the water tap:
  - Fill the hose with water before establishing the connection to prevent any air from entering the heating system
  - Unscrew the hose again after filling to break the connection reliably.
- Slowly fill with water while checking the water level on the hydrometer or manometer.
- Open the bleed valves briefly after topping up until all the air has been vented from the radiator.

# 7. Maintenance BioLyt (50-75)

## 7.1 Commissioning

When commissioning the system, also observe the notes in the installation manual.

**1. Checks:**

- Are the slide valves in the heating flow and return lines open?
- Is the combustion air supply into the boiler room adequate?
- Is the main switch on the boiler control unit set to “ON”?
- Is the combustion chamber closed?
- Is the connection between burner and pellet hopper OK (clamping ring)?
- Are all the burner connectors plugged in?
- Is the cleaning cover with the induced draught fan (top rear) closed?
- Is the pellet hopper full?
- Is the pellet hopper cover sealed tight?

**2. Starting the burner:**

- Takes place automatically via the heating regulator when there is a heat demand.

## 7.2 Regular checks

- Is the seal in the pellet hopper fitted cleanly and correctly?
- Is the combustion chamber door properly closed (palm grip closed tight)?
- Is the cleaning cover properly closed (all wing nuts tightened)?

## 7.3 Cleaning the boiler

**Caution: NEVER use the main switch, but always the Stop button (or TopTronic®T) to turn the burner off.**

**Checking / cleaning every 4-8 weeks or according to display or every 4 tonnes of pellets**

1. Switch off the burner:
   - Operate blocking switch
   - Wait for burn-out to be completed
2. Allow boiler to cool down for 20 minutes
3. Remove the bottom front casing panel (1, Fig. 03)
4. Unscrew and remove palm grip (2, Fig. 04), pull out threaded rod and slide the ash box out from the front. Dispose of the ash.

**Fig. 03**

**The threaded rod on the front can be screwed in for transporting the ash box (3, Fig. 05).**

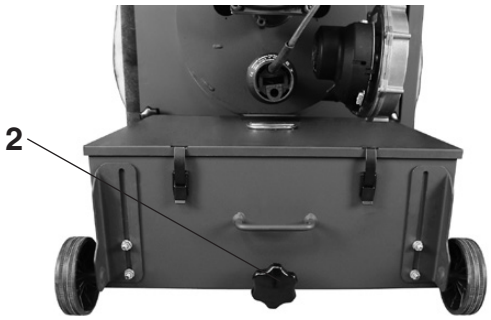



**Fig. 04**

**Fig. 05**

5. Follow the steps above in reverse order to reassemble; ensure that the ash box is fitted and sealed properly.
6. If necessary, reset display message "W:40", see chapter 9, page 63.

**Cleaning every 2-6 months or every 6 tonnes of pellets (BioLyt 50) or every 8 tonnes of pellets (BioLyt 70,75)**

**Only by service engineers**

1. Switch off the burner:
   - Operate blocking switch
   - Wait for burn-out to be completed
2. Allow boiler to cool down for 20 minutes.
3. Turn the boiler off with an omnipolar switch (must be de-energised)
4. Remove the bottom front casing panel.
5. Emptying the ash box: Unscrew palm grip, pull out the threaded rod and slide the ash box out from the front. Dispose of the ash.
6. Remove the pellet hopper cover.
7. Unscrew and remove the top front casing panel.
8. Remove both side plates: pull forward and then push down to remove them.
9. Open the clamping ring above the rotary valve (Fig. 06).

**Remove the clamping ring before opening the combustion chamber door.**

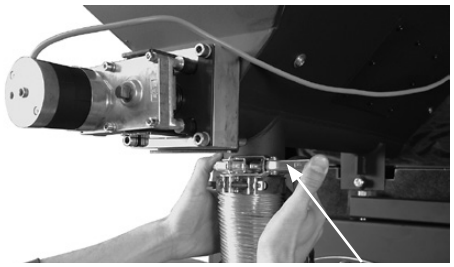


**Fig. 06**

10. Open the combustion chamber door (2 palm grips BioLyt (50), 4 palm grips BioLyt (70,75) Fig. 07). Check and ensure that all the parts have cooled down sufficiently! Wear safety gloves.

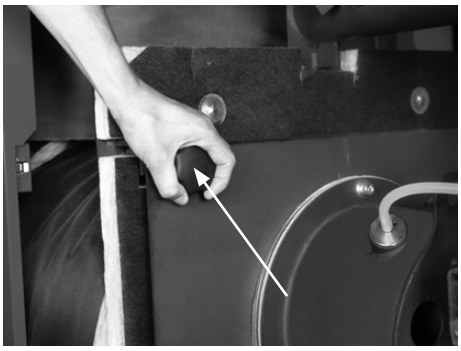


**Fig. 07**

11. Remove the ash from within the combustion chamber and from the baffle plate, ideally with a vacuum cleaner. Special attention must be paid to cleaning the flue gas outlet in the standing flue (arrows - Fig. 08).

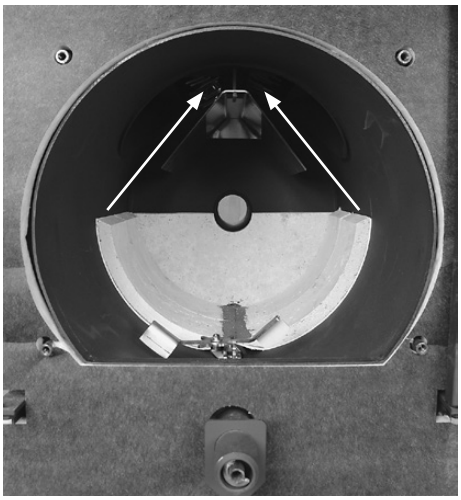


**Fig. 08**

**Small tension cracks in the refractories and slight deformation in the inside of the burner and the combustion chamber will not affect the correct functioning of the boiler. They are the result of stresses caused by temperature changes.**

12. Remove the residues from the burner very carefully, using a vacuum cleaner - especially in the rear area (directly beneath the feeder screw); the air holes must be free from any residues. Also vacuum the top of the burner. Wipe off any ash from the combustion chamber sensor (Fig. 09).

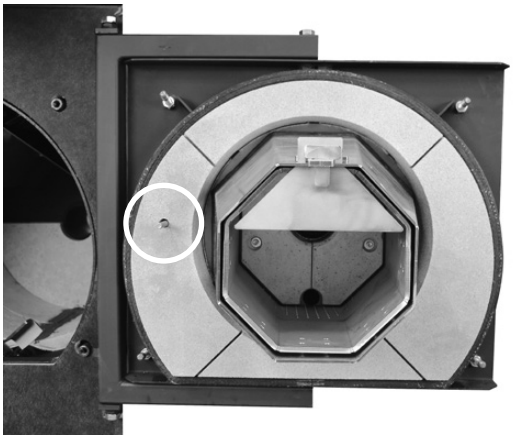


**Fig. 09**

**Annual cleaning or every 18 tonnes of pellets (BioLyt 50) or every 24 tonnes of pellets (BioLyt 70,75)**
In addition to the points described under “Cleaning every 2-6 months,” the flue gas collector must be cleaned once a year. To do this, dismantle the flue gas collector lid, including the fan (Fig. 10).

Procedure:
1. Remove casing panel
2. Disconnect plug (A)
3. Unscrew wing nuts (B)
4. Detach flue gas collector cover (C)
5. Vacuum out the ashes (D, Fig. 11)

The mechanism of the automatic heating surface cleaner should not be dismantled.
The flue gas conduit between the boiler and the flue gas duct should also be checked for ash residues and cleaned if necessary.

Remove any dust adhering to the lambda probe (E), using a vacuum cleaner.

**Also observe: Chapter "Maintenance" in the "Techn. Information / installation instructions"**

It is essential to clean the entire boiler thoroughly at the end of the heating season.
Insufficient cleaning leads to increased fuel consumption and also shortens the service life of the boiler.

**Small tension cracks in the refractory lining will not affect the correct functioning of the boiler. They are the result of stresses caused by temperature changes.**

The boiler should be serviced in accordance with the applicable country-specific regulations - but at least once per year - or thorough cleaning performed by a heating engineer (chimney sweep, installer or Hoval Customer Service).

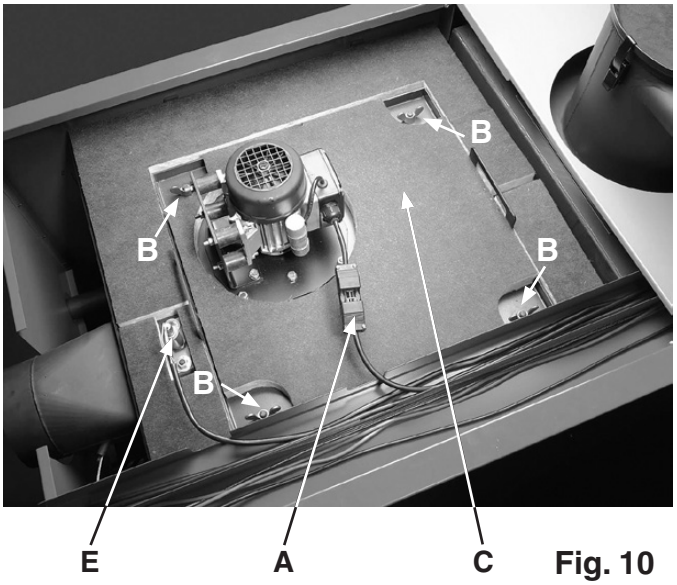



**Fig. 10**

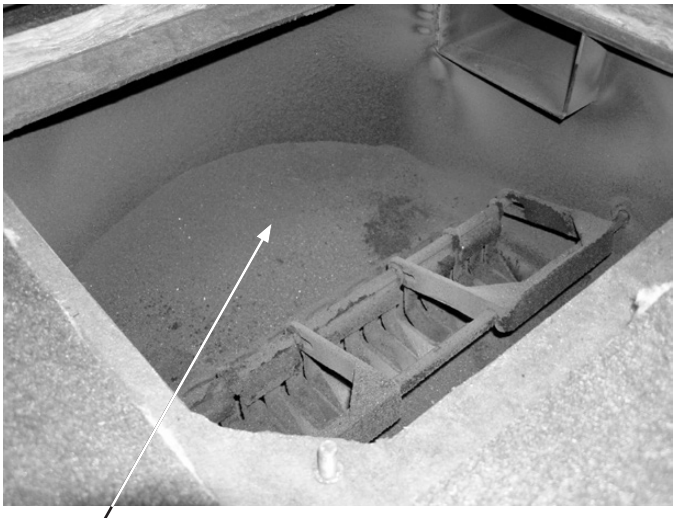



**Fig. 11**

# 8. Maintenance BioLyt (100-160)

## 8.1 Commissioning

When commissioning the system, also observe the notes in the installation manual.

**1. Checks:**

- Are the slide valves in the heating flow and return lines open?
- Is the combustion air supply into the boiler room adequate?
- Is the main switch on the boiler control unit set to “ON”?
- Is the combustion chamber closed?
- Is the connection between burners and pellet box OK (clamping ring)?
- Are all the burner connectors plugged in?
- Is the cleaning cover with the induced draught fan (top rear) closed?
- Is the pellet hopper full?
- Is the pellet hopper cover sealed tight?

**2. Starting the burner:**

- Takes place automatically via the heating regulator when there is a heat demand.

## 8.2 Regular checks

- Is the seal in the pellet hopper fitted cleanly and correctly?
- Is the combustion chamber door properly closed (palm grip closed tight)?
- Is the cleaning cover properly closed (all wing nuts tightened)?

## 8.3 Cleaning the boiler

**Caution: Always switch the burner off via the blocking switch.**

**Checking / cleaning every 4-8 weeks or according to display or every 9 t of pellets**

1. Switch off the burner:
   - Operate blocking switch
   - Wait for burn-out to be completed
2. Let the boiler cool down for 20 minutes
3. Remove the front cover (1, Fig. 12) to check the filling level of the ash box.

**Fig. 12**

4. If the ash box is full: Unscrew palm grips (2, Fig. 12), pull out the threaded rods and slide the ash box out from the front (Fig. 13). Dispose of the ash.

**Fig. 13**

5. Follow the steps above in reverse order to reassemble; ensure that the ash box is fitted and sealed properly, tighten the palm grips firmly and close the cover.
6. If necessary, reset display message "W:40", see chapter 9, page 63.

**Cleaning every 2-6 months or according to display or every 12 t of pellets for the BioLyt (100,110), 15 t of pellets for the BioLyt (130) and 18 t of pellets for the BioLyt (150,160).**

**Only by service engineers**

1. Switch off the burner:
   - Operate blocking switch
   - Wait for burn-out to be completed
2. Allow boiler to cool down for 20 minutes.
3. Turn the boiler off with an omnipolar switch (must be de-energised)
4. Emptying the ash box: Unscrew palm grip (2, Fig. 12), pull out the threaded rod and slide the ash box out from the front. Remove the cover of the ash box.Dispose of the ash.
5. Unscrew and remove the front casing panel.
6. Remove both side plates:
   pull forward and then push down to remove them.
7. Open the clamping ring above the rotary valve (Fig. 14).

**Remove the clamping ring before opening the combustion chamber door.**

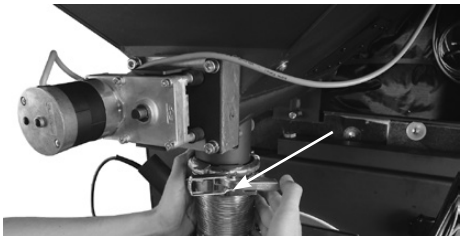


**Fig. 14**

8. Open the combustion chamber door (palm grips, Fig. 15). Check and ensure that all the parts have cooled down sufficiently! Wear safety gloves.

**Fig. 15**

9. Remove the ash from within the combustion chamber and from the baffle plate, ideally with a vacuum cleaner. Special attention must be paid to cleaning the flue gas outlet in the standing flue (arrows - Fig. 16).

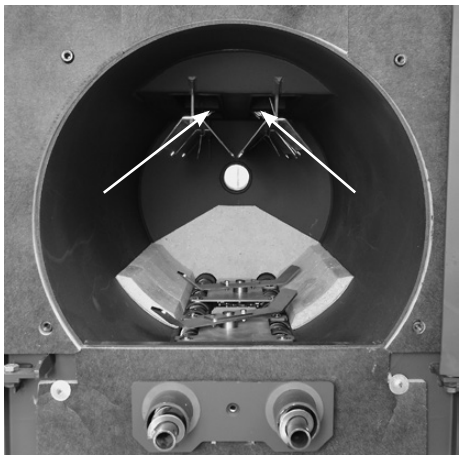


**Fig. 16**

10. Remove the residues from the burner **very carefully, using a vacuum cleaner** - especially in the rear area (directly beneath the feeder screw); **the air holes must be free from any residues**. Also vacuum the top of the burner. Wipe off any ash from the combustion chamber sensor (Fig. 17).

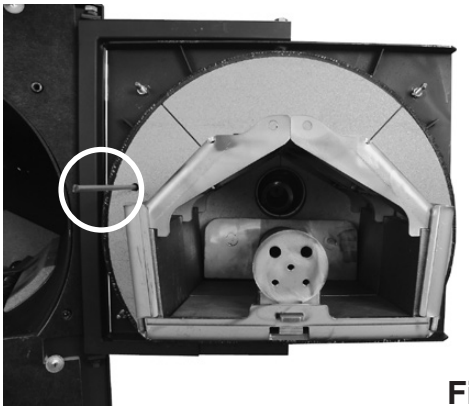


**Fig. 17**

**Small tension cracks in the refractories and slight deformation in the inside of the burner and the combustion chamber will not affect the correct functioning of the boiler. They are the result of stresses caused by temperature changes.**

**Clean annually or every 36 t of pellets for the BioLyt (100,110), 45 t of pellets for the BioLyt (130) and 54 t of pellets for the BioLyt (150,160).**
In addition to the points described under “Cleaning every 2-6 months,” the flue gas collector must be cleaned once a year. To do this, dismantle both covers of the flue gas collector lids in front of and behind the fan (Fig. 18).

Procedure:
1. Remove casing panel
2. Disconnect plug (A)
3. Unscrew wing nuts (B)
4. Remove insulation mats
5. Remove flue gas collector cover (C)
6. Vacuum out the ashes (D, Fig. 19)

The mechanism of the automatic heating surface cleaner should not be dismantled.
The flue gas conduit between the boiler and the flue gas duct should also be checked for ash residues and cleaned if necessary.

Remove any dust adhering to the lambda probe (E), using a vacuum cleaner.

**Also observe: Chapter "Maintenance" in the "Techn. Information / installation instructions"**

It is essential to clean the entire boiler thoroughly at the end of the heating season.
Insufficient cleaning leads to increased fuel consumption and also shortens the service life of the boiler.

**Small tension cracks in the refractory lining will not affect the correct functioning of the boiler. They are the result of stresses caused by temperature changes.**

The boiler should be serviced in accordance with the applicable country-specific regulations - but at least once per year - or thorough cleaning performed by a heating engineer (chimney sweep, installer or Hoval Customer Service).

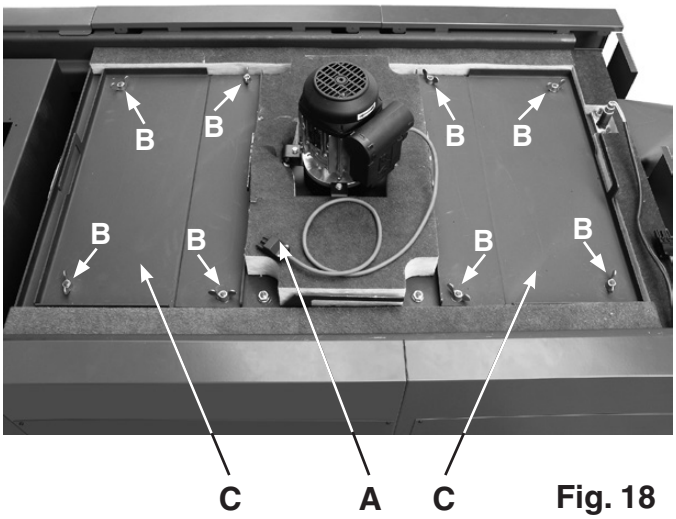


Fig. 18

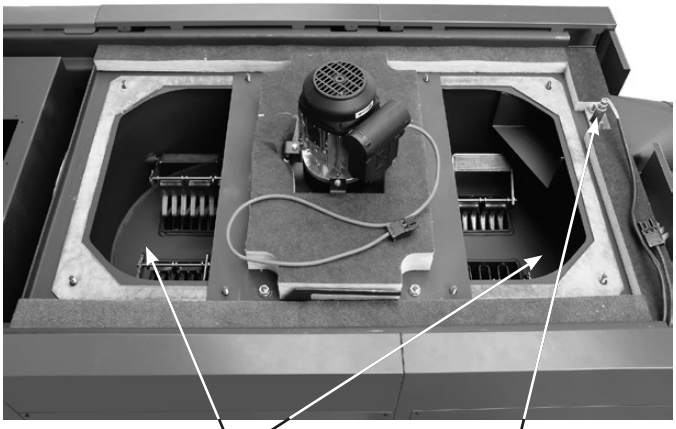
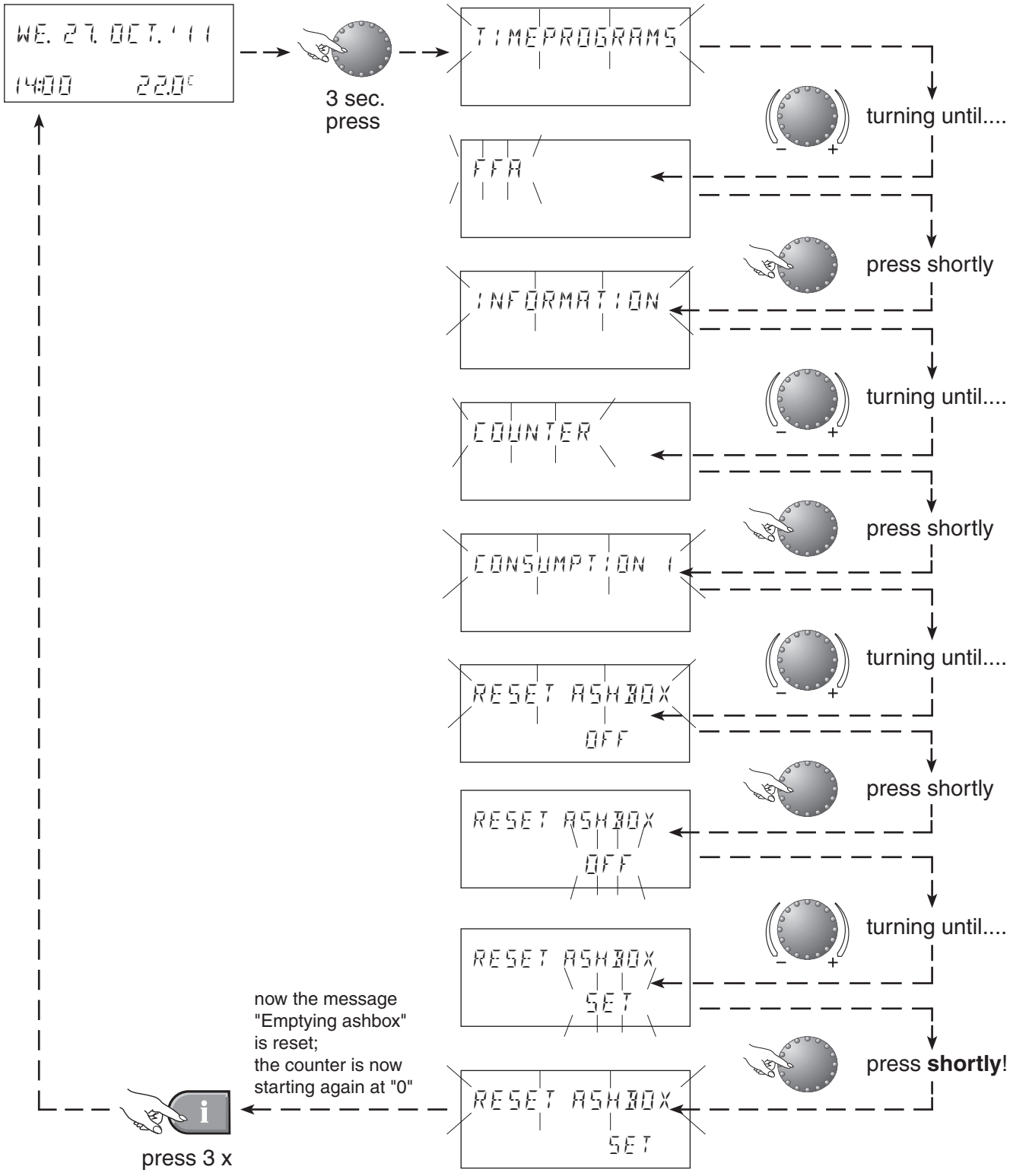


Fig. 19

# 9. Emptying the ash box and resetting the counter

## 9.1 Resetting the message "empty ash box" (W:40)



## 10. How you can save energy

The room temperatures and the operating times of the heating system have a significant influence on fuel consumption.

*Lowering room temperature by 1°C will result in a fuel saving of up to 6%. For this reason, bear in mind the following tips:*

- It pays to turn off the radiators in unused rooms, as long as there is no risk of frost and no moisture damage to the building structure or furniture is to be expected.
- Set the switch on your heating regulator to “Summer” as soon as the daily average outside temperature exceeds 12°C.
- In the main living areas, additional heat is often generated by people, televisions, fire places, tiled stoves and also direct sunlight. These cannot be compensated for by a weather-dependent regulator. The installation of thermostatic radiator valves might be advisable in these rooms.

Draughts in the home are not only unpleasant, but also indicate that heating energy is being lost.

*You can save fuel if you ...*

- Keep the doors and windows closed in winter.
- Operate kitchen and bathroom ventilation fans only when vapours and smells need to be extracted.
- Only ventilate for short periods, but more often.
- Seal doors and windows to prevent constant leakage losses.

Insulation will help retain precious heat.

*Take advantage of these possibilities and...*

- Close the window and door shutters at night.
- Draw the curtains in the evening.
- Make sure that heating and hot water pipes are insulated in unheated rooms.

Maintaining the temperature of the radiators as low as possible will prevent unnecessary heat losses. For this reason, it is important to ensure that the radiator can release its heat into the room without any obstructions. You should therefore avoid:

- Covered radiators
- Floor-length curtains in front of radiators
- Windowsills covered with objects that prevent any air ingress.

Savings are also possible for water heating.

- Set the hot water temperature as low as possible. Find out at what temperature there is still sufficient hot water available.
- If you have installed a hot water circulation pump, it is worth switching it off during the night with a timer.

## 11. Instructions on proper disposal of individual system components

The individual components (particularly boiler body, refractory bricks, casing panels, insulation mats and electric control) must be disposed of separately.

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